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CLIMATOLOGICAL DATA FOR NOVEMBER, 1911.

DISTRICT No. 1, NORTH ATLANTIC STATES.

WILFORD M. WILSON, District Editor.

GENERAL SUMMARY.

November, 1911, in its frequent and sudden weather changes resembled a midwinter month, and was quite disagreeable in some sections, yet it presented pleasant features in others and was spoken of by many as a month of fine, open weather well adapted to the interests of all classes. However, the weather was much colder than that generally experienced during the eleventh month of the year, and the changes in temperature were numerous and pronounced. Well-defined storm areas passed over the district at remarkably regular intervals, assuming largely the characteristics of those of midwinter. Their movement was rapid, the wind velocity was unusually high for November, and the precipitation was abundant, though in some parts of the district it was slightly less than the normal. Gales wrought great damage along the coasts, severe cold waves occurred and exceptionally heavy snows fell in some northern localities.

The following table presents the leading features of meteorological interest for the several sections of the district:

States or parts of States within district No. 1.	Temperature.				Precipitation.				Average number of—	
	Average.	Departure.	Highest.	Lowest.	Average.	Departure.	Greatest total.	Least total.	Rainy days.	Clear days.
New England	37.0	−0.9	71	0	4.21	+0.15	8.99	1.55	11	10
New York	35.6	−2.1	69	−1	3.13	+0.19	8.96	0.82	11	8
Pennsylvania	38.2	−2.3	77	9	2.81	+0.06	5.68	0.99	9	9
New Jersey	41.3	−1.6	73	13	5.17	+1.77	6.50	3.17	10	8
Maryland, Delaware, and District of Columbia	43.1	−1.7	82	14	4.26	+1.45	8.85	1.87	10	12
West Virginia	39.9	−1.9	79	7	1.90	−0.05	2.76	1.27	5	10
Virginia	42.7	−2.3	75	13	3.26	+0.94	5.24	2.08	9	12

TEMPERATURE.

The average temperature for all stations in the district was nearly 40°, which is about 1.8° less than the normal. At several stations near the Piedmont region in Maine and in eastern Massachusetts and a few scattered localities in other States, the temperature averaged higher than usual in November, but the records of these stations seem to represent purely local conditions except in the regions of New England above specified. In about half of the district there was a deficiency in temperature amounting to 2° or more daily. This deficiency showed a tendency to increase with the altitude and exceeded 5° at four stations whose elevations are from 1,245 to 2,300 feet.

Marked changes in temperature occurred so often as to make it impracticable to describe the month as being composed of a few well-defined warm and cool periods, as is frequently the case. At New York City, where the fluctuations in temperature are much less than at most places in the district, the variations in temperature ranged from 17° to 44° and occurred in brief periods never exceeding four days in length and sometimes being less than 24 hours. In this series of changes, which is typical of the month's weather over the greater part of the district, the warm waves occurred on the 1st, 7th, 12th, 15th, 18th, 20th, 24th, and 28th. Except on the 20th they were attended by abundant precipitation over extensive areas, and all were separated by periods of cold weather.

The most noteworthy cold periods were the 2d and 3d, the 13th to 17th, and the 22d and 23d. The first of these periods derives its importance from the fact that over the southern coast regions of the district it was the occasion of the first killing frost of the season. The next cold period of importance began on the afternoon of the 12th or morning of the 13th with a cold wave of unusual intensity in which there was a rapid fall of 30° to 50° or more in temperature throughout the greater part of the district, in many instances bringing the highest and lowest temperatures of the month within less than 24 hours of each other. As far south as Virginia the temperature fell below 20° at most stations on the 13th, and, though in the northern part of the district this cold wave produced temperatures only a few degrees lower, it caused colder weather in practically all sections than had previously occurred earlier in the season.

The highest temperature recorded within the district was 82° at Porto Bello, Md., on the 18th, while the lowest was −1° at Morehouseville, N. Y., on the 17th, but these extremes of temperature were not unusual for the month of November. The mean temperatures varied from 28.4° at Morehouseville, N. Y., to 50.2° at Eastville, Va.

PRECIPITATION.

A succession of well-developed storms passing rapidly over the district caused frequent and generally abundant precipitation. The total amount received during the month exceeded the normal for the district as a whole and for each of the sections, except West Virginia. However, there was a slight deficiency of precipitation at many of the stations in the New York, New England, and Pennsylvania sections, which was more than compensated for by an excess of from 2 to 6 inches that occurred at stations in the coast region from southern Maryland to Massachusetts.

The average precipitation for all stations in the district was 3.53 inches or nearly two-thirds of an inch more than the normal. The amounts varied greatly in the different sections, the extremes being 8.99 inches at Kingston, R. I., and 0.82 inch at Addison, N. Y. A very extensive

area received more than 6 inches during the month, but this was too near the coast to permit the occurrence of river floods. In all sections precipitation occurred at remarkably regular intervals and in such amounts as to favor the maintenance of steady stream flow and an unvarying water supply. Hence, the regions of least precipitation in the interior experienced no insufficiency of moisture while the coast regions witnessed no floods. Only two stations in the entire district reported precipitation at excessive rates and the greatest amount of rain that fell within 24 consecutive hours was only 2.72 inches at Newark, N. J., on the 6th and 7th.

The heaviest rains occurred about the 6th, 17th, and 24th. The number of days with precipitation was least in West Virginia, where the average was only 5, but in the other States of the district the number was generally close to 10, being greatest in the northern sections. At Trenton Falls and Morehouseville, N. Y., there was 0.01 inch or more of precipitation on 18 days.

SNOWFALL.

The total snowfall for the month varied from 48.2 inches at Morehouseville, N. Y., to none at several stations near the coast from Rhode Island southward. At all the stations in Virginia, West Virginia, Maryland, Delaware, and in parts of Pennsylvania, New York, Connecticut, Rhode Island, and Massachusetts there was less than 1 inch of snow during the month. Probably one-third of the district received less than 1 inch and two-thirds less than 6 inches. The remaining third of the district witnessed several heavy falls of snow. The snowfall of the 15th was remarkable. On that date, including part of the following day, 16 inches of snow fell at Morehouseville, N. Y., and 4 inches or more were recorded at 9 other stations situated in the central part of the State and representing about 10 contiguous counties. In northern New England this storm was attended by from 3 to 10 inches of snowfall.

GALES.

The wind movement was much greater than usual during the month and in many instances destructive velocities were attained. On the night of the 12th and the morning of the 13th the Atlantic seaboard from New York to Boston was lashed by a gale that attained a velocity of 72 miles an hour at New York City. It destroyed small vessels and threatened even the largest and caused the loss of many lives. A barge bearing a crew of 14 men was torn from the towing craft, rendered helpless, and carried beyond assistance. After a search of nearly 36 hours by the United States revenue cutter *Mohawk*, the barge and crew were given up as lost. Several fatal wrecks took place in Long Island Sound. Four men were washed overboard from the schooner *Witch Hazel*, disabled near New Haven, and an unknown number were lost when another schooner went down in Plum Gut near New London. A score or more of small boats were dashed upon the beach and splintered in the more exposed parts of New York Harbor and numerous oyster smacks and other craft were piled on the beach on Staten Island.

The destruction and suffering were not confined to the sea for the force of the wind was sufficient to demolish buildings and ruin entire orchards as far inland as Middletown, N. Y., more than 40 miles from the ocean. The rapid fall in temperature, in some places amounting to nearly 40° within 12 hours, attended by sleet or snow, brought keen suffering to the homeless in New York and other cities.

RIVER CONDITIONS.

The height of the water in the Hudson, Susquehanna, and Delaware systems was considerably above the November average, but the highest stages were much below the flood line. In the principal streams the volumes of water were remarkably constant, the difference between the highest and lowest stages being generally less than 3.5 feet. At Trenton Falls, N. Y., the low-water record for November was broken on the 4th, when the gage reading was 4 feet.

SUNSHINE.

Although the month was cooler and wetter than usual, the percentage of the possible sunshine was somewhat above the normal, the average for the district being 49 and equaling that for the preceding month. The total number of hours of sunshine was only 83 at Eastport, Me., and 112 at Albany, N. Y., but over southern New England and that part of the district farther south there was much clear weather for the season, and the records for the month gave 135 to 190 hours of sunshine. Atlantic City, N. J., reported 13 days with 80 per cent or more of the possible sunshine. For the entire district the average number of such days was 8, while the average number of days with 20 per cent or less of the possible sunshine was 9. There were fewer than 5 clear days at some stations in Maine, New Hampshire, Vermont, Massachusetts, and New York, but the average number reported in these States was about 9 or nearly the same as the average for the whole district.

TABLE 1.—*Climatological data for November, 1911. District No. 1, North Atlantic States.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Maine.																				
Bar Harbor	Hancock	20	25	37.4	− 1.5	58	7†	14	26	31	6.65	+ 1.50	1.60	5.0	13	14	7	9	nw.	William Miller.
Cornish	York	778	56	37.6	+ 2.5	67	7†	8	17	42	3.78	− 0.56	0.90	9.5	10	8	16	6	w.	T. H. West.
Eastport	Washington	53	30	36.3	− .5	58	13	17	26	32	3.83	− 0.25	0.93	5.3	14	0	14	16	sw.	U. S. Weather Bureau.
Fairfield	Somerset	90	26	33.7	− 1.7	60	12†	13	23	31	2.81	− 0.58	0.78	4.5	6	13	6	11	.....	E. F. Parker.
Farmington	Franklin	450	14	33.4	+ .3	59	7†	12	23†	33	3.40	− 0.96	0.90	9.0	12	5	8	17	nw.	State Normal School.
Gardiner	Kennebec	163	19	37.6	+ .9	67	13	15	23	40	3.76	− 0.40	1.09	3.5	9	14	2	14	w.	Samuel D. Soule.
Greenville	Piscataquis	1,000	7	29.4	.....	58	12†	8	26	37	3.86	.....	1.18	11.0	12	.....	.....	.....	.....	U. S. Weather Bureau.
Houlton	Aroostook	362	9	31.2	.....	60	13	9	21†	37	2.65	.....	1.00	11.0	6	16	3	11	n.	Bangor & Aroostook R. R.
Lewiston	Androscoggin	185	37	35.8	+ .1	61	11†	19	23	29	3.42	− 1.01	1.20	8.0	11	11	8	11	nw.	Union Water Power Co.
Madison	Somerset	257	8	31.6	.....	62	13	9	23	34	3.67	.....	0.77	8.0	8	16	1	13	nw.	William Jardine.
Millinocket	Penobscot	386	8	31.8	.....	60	13	6	26	34	4.36	.....	1.25	11.5	11	6	5	19	w.	H. S. Ferguson.
North Bridgton	Cumberland	450	18	35.8	− 1.2	65	12	14	23†	36	3.21	− 1.85	0.90	15.5	7	4	19	7	sw.	G. E. Chadbourne.
Orono	Penobscot	129	42	35.2	+ 1.0	63	13	7	19	37	3.28	− 0.89	0.64	.....	10	18	4	8	nw.	Agr. Exp. Station.
Patten	do	550	9	29.2*	.....	60	13	0	26	37	4.02	.....	1.62	13.3	8	5*	10*	12*	w.	Bangor & Aroostook R. R.
Portland	Cumberland	99	40	37.4	− .2	64	7	19	17	24	3.51	− 0.29	1.26	1.2	13	9	8	13	w.	U. S. Weather Bureau.
Presque Isle	Aroostook	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. L. Merriman.
Rumford Falls	Oxford	505	18	33.1	− 1.0	62	12	16	26†	26	2.88	− 1.85	0.80	12.4	11	14	8	8	nw.	Charles A. Mixer.
Winslow	Kennebec	90	16	36.4	.....	62	7†	13	23	33	3.04	.....	0.78	5.5	8	12	9	9	w.	Hollingsworth & Whitney Co.
New Hampshire.																				
Alstead Center	Cheshire	1,120	7	33.4	− 1.6	61	12†	12	22	41	2.80	− 1.72	0.60	8.0	11	13	6	11	sw.	Frank Dewing.
Benton	Grafton	.....	2	29.8	.....	60	11	9	17	28	3.45	.....	1.28	11.0	9	8	8	14	.....	State Sanatorium.
Bethlehem	do	1,470	19	30.9	− 1.7	63	12	2	17	43	2.96	− 0.75	0.92	8.5	13	6	6	18	w.	Benjamin Tucker.
Concord	Merrimack	350	51	36.2	− .6	67	12	19	17	32	3.03	− 0.36	0.78	4.7	13	5	14	11	w.	U. S. Weather Bureau.
Durham	Stafford	88	16	36.3	− 2.7	68	12	3	26	41	3.16	− 1.32	1.05	.....	6	12	9	9	w.	Agr. Exp. Station.
Franklin	Merrimack	440	12	36.0	.....	68	12	13	17	38	3.39	.....	0.81	8.0	10	9	10	11	nw.	Dr. C. P. Webster.
Grafton	Grafton	863	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Perley R. Kimball.
Hanover	do	603	77	33.5	− .1	63	12	12	26	30	2.00	− 1.03	0.45	6.4	13	3	9	18	w.	Dartmouth College.
Keene	Cheshire	506	26	36.4	− .3	65	11†	12	23	41	2.70	− 1.22	0.65	4.6	9	4	12	14	nw.	Samuel Wadsworth.
Nashua [1]	Hillsboro	125	26	37.8	− .4	68	12	20	23	31	3.72	− 0.26	1.00	3.5	12	.....	.....	.....	.....	Jackson Co.
Newton	Rockingham	.....	23	37.3	− .5	67	12	15	14†	41	4.10	− 0.07	1.07	T.	8	7	18	5	sw.	W. C. Gale.
Plymouth	Grafton	500	23	33.1	+ .4	65	12	12	26	39	3.15	− 0.77	0.69	9.0	8	8	6	16	w.	Hattie G. Trow.
Vermont.																				
Bloomfield	Essex	.....	4	30.8	.....	64	13	1	17	40	2.10	.....	0.51	16.2	13	9	3	18	s.	Lyman Falls L. & P. Co.
Cavendish	Windsor	910	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. A. Kingsbury.
Chelsea	Orange	840	16	31.6	− 1.6	63	12†	3	17	46	1.55	− 2.63	0.45	6.0	9	6	3	21	s.	W. F. Dewey.
Jacksonville	Windham	1,000	26	33.7	− .2	61	11	10	14†	42	1.81	− 2.97	0.90	5.0	12	16	9	5	nw.	Martha French.
Manchester	Bennington	980	12	34.4	.....	66	12	9	17	31	1.83	.....	0.51	5.5	8	3	11	16	sw.	N. M. Canfield.
St. Johnsbury	Caledonia	711	18	32.4	− .9	65	12	4	17	41	2.50	− 1.46	0.66	7.5	14	5	8	17	s.	Fairbanks Museum.
Woodstock	Windsor	700	19	31.4	− 2.4	55	7	2	17	33	2.31	− 1.20	0.58	9.0	10	2	6	22	.....	John S. Eaton.
Massachusetts.																				
Amherst	Hampshire	222	22	37.2	− 1.1	66	12	18	23	34	3.84	− 0.01	0.88	1.0	12	1	9	20	w.	Agr. Exp. Station.
Blue Hill	Norfolk	640	27	38.7	− 1.0	64	11†	17	17	39	5.71	+ 1.09	1.49	.4	13	10	10	10	w.	A. Lawrence Rotch.
Boston	Suffolk	124	41	41.8	+ .6	68	12	25	17	28	4.29	+ 0.19	1.01	.3	11	10	10	10	w.	U. S. Weather Bureau.
Chestnut Hill	do	124	31	40.8	− .5	67	12	20	14†	38	4.40	− 0.18	0.85	.....	12	20	0	10	.....	Met. Water Board.
Clinton	Worcester	370	15	38.2	.....	68	12	20	16	41	2.59	.....	0.90	1.2	11	.....	.....	.....	.....	Do.
Concord	Middlesex	139	21	37.8	− .1	68	12	17	14	36	4.09	+ 0.15	0.96	2.0	11	10	10	10	sw.	Fred A. Tower.
Fall River	Bristol	200	45	41.3	− 1.6	68	12	23	17	28	6.79	+ 2.03	1.40	0	13	8	19	3	nw.	C. V. S. Remington.
Fitchburg	Worcester	550	28	38.2	− .2	68	11	18	17	29	3.41	− 0.98	0.89	1.2	13	14	7	9	w.	Dr. A. P. Mason.
Framingham	Middlesex	160	31	39.8	− .9	67	12	20	17†	39	4.39	+ 0.14	1.06	.8	11	.....	.....	.....	.....	Met. Water Board.
Hyannis	Barnstable	31	20	41.6	− 3.3	59	12	23	23	23	5.72	+ 0.69	0.90	.....	15	11	14	5	nw.	C. F. Sleeper.
Lawrence	Essex	51	27	38.2	− 1.7	67	12	18	23	37	3.68	− 0.52	1.01	1.2	11	7	20	3	nw.	Essex Co.
Lowell	Middlesex	100	26	39.4	− .1	67	12	20	23	39	3.57	− 0.44	0.94	.....	8	.....	.....	.....	.....	Props. Locks & Canals.
Middleboro	Plymouth	53	25	40.2	− .1	67	12	17	23†	36	6.80	+ 2.22	1.43	T.	12	7	12	11	sw.	A. R. Gurney.
Monson	Hampden	420	27	37.1	− 1.8	70	12	17	23	32	4.16	− 0.14	0.94	3.0	13	10	13	7	nw.	Dr. G. E. Fuller.
Nantucket	Nantucket	15	25	43.8	− 1.4	63	12	28	23	22	6.30	+ 3.02	1.55	T.	16	4	11	15	w.	U. S. Weather Bureau.
New Bedford	Bristol	88	99	41.9	0	65	12	24	17	26	6.17	+ 1.81	1.25	.....	9	20	2	8	nw.	City engineer.
Norfolk	Norfolk	244	8	38.6	.....	68	12†	16	14†	46	5.46	.....	1.40	T.	8	9	7	14	w.	Ruby H. Martyn.
Northampton	Hampshire	205	3	37.1	.....	64	13	18	26	45	3.12	.....	0.84	2.0	10	.....	.....	.....	.....	D. E. Hoxie.
Plymouth	Plymouth	.....	26	39.9	.....	68	13	20	23	40	6.68	.....	1.50	0	9	17	3	10	n.	Laura B. Knapp.
Provincetown	Barnstable	40	24	42.0	− 1.9	58	7†	24	16	27	3.50	− 0.10	1.05	.....	10	25	0	5	sw.	Gideon Bowley.
Rockport	Essex	25	9	41.2	.....	61	12	20	17	29	6.27	.....	1.25	.....	10	12	10	8	nw.	C. F. P. Bearse.
Rutland	Worcester	1,160	9	35.0	.....	64	11	16	13†	41	4.06	.....	0.92	2.2	11	15	7	8	sw.	State Sanatorium.
South Egremont	Berkshire	764	9	32.3	.....	62	12	10	23	32	3.35	.....	0.74	9.0	12	.....	.....	.....	w.	Roscoe C. Taft.
Turners Falls	Franklin	200	20	36.2	− 1.0	65	12	16	23	25	3.52	+ 0.46	0.96	2.8	8	.....	.....	.....	.....	Turners Falls Co.
Westboro	Worcester	298	37	41.2	+ 1.4	70	12	22	17	37	4.43	+ 0.29	1.05	2.0	12	.....	.....	.....	.....	G. S. Newcomb.
Williamstown	Berkshire	711	30	35.4	− 2.2	65	12	16	17†	30	1.93	− 0.60	0.42	8.0	14	3	15	12	w.	Williams College.
Worcester	Worcester	518	19	38.3	− 2.3	64	11	23	22	25	3.27	− 2.11	0.62	2.4	11	8	10	12	sw.	G. W. Swan.
Rhode Island.																				
Block Island	Newport	26	31	44.6	− .7	63	12	29	17	21	6.06	+ 2.18	1.19	0	15	5	11	14	nw.	U. S. Weather Bureau.
Bristol	Bristol	53	25	42.6	− 1.2	62	12	26	17	29	6.85	+ 2.88	1.37	T.	15	14	11	5	nw.	N. G. Herreshoff.
Kingston	Washington	250	22	39.0	− 2.1	65	12	18	14†	34	8.99	+ 3.91	1.67	0	12	13	8	10	w.	Nathaniel Helme.
Narragansett Pier	Newport	22	29	42.0	− 1.1	63	12	20	14	37	7.92	+ 3.56	1.30	T.	14	16	8	6	sw.	U. S. Weather Bureau.
Providence	Providence	182	7	40.6	+ .2	67	12	22	17	30	5.61	+ 1.51	1.27	0	13	10	12	8	nw.	Do.
Connecticut.																				
Bridgeport	Fairfield	20	18	42.0	.....	67	12	21	23	31	5.74	.....	1.53	1.0	11	12	8	10	w.	William Jennings.
Canton	Hartford	900	50	38.4	− .5	67	12	17	30	30	4.08	− 0.53	1.15	2.0	8	12	8	10	sw.	G. J. Case.
Colchester	New London	370	25	37.9	− 3.2	65	11†	15	23	41	6.97	+ 2.11	1.88	T.	10	11	10	9	w.	S. P. Willard.
Cream Hill	Litchfield	1,300	15	33.8	− 3.9	62	11	14	17	30	4.02	+ 0.62	1.10	10.7	14	11	10	9	sw.	C. L. Gold.
Danielson	Windham	300	9	37.6	.....	66	12	15	23	32	7.23	.....	2.70	.....	8	14	8	8	n.	F. E. Bitgood.
Hartford	Hartford	159	7	39.5	0	67	12	23	14	35	4.18	+ .36	1.23	1.1	12	5	13	12	sw.	U. S. Weather Bureau.
Hawleyville	Fairfield	600	13	39.9	+ .3	71	7	17	17	39	4.47	+ 1.34	1.24	2.0	9	10	10	10	nw.	C. B. Hawley.
New Haven	New Haven	107	124	40.8	− .5	66	12	24	14†	29	6.40	+ 2.82	1.71	.3	12	9	12	9	w.	U. S. Weather Bureau.
New London	New London	47	41	41.2	− 1.0	67	12	24	14†	39	6.52	+ 2.42	1.60	0	10	11	14	5	sw.	T. C. Dillon.
North Grosvenor Dale	Windham	400	21	37.6	− 1.8	67	11	15	22	39	3.21	− 1.81	0.66	T.	10	12	10	8	nw.	Grosvenor Dale Co.
Norwalk	Fairfield	116	21	38.7	− 1.6	68	12	17	17†	28	5.42	+ 0.84	1.74	2.0	10	13	10	7	nw.	G. C. Comstock.

[1] Not considered in averages.

TABLE 1.—*Climatological data for November, 1911. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days. 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Connecticut*—Contd.**																				
Southington	Hartford	140	42	39.0	+ .6	68	12	16	23†	39	4.35	+ 0.47	1.30	2.0	9	6	19	5	nw.	Luman Andrews.
Storrs	Tolland	640	23	38.0	− .9	64	12	17	23	37	4.39	− 0.05	1.45	0	10	10	5	15	w.	Agr. Exp. Station.
Torrington	Litchfield	625	10	36.9	.....	66	13	14	23	43	3.24	.....	1.05	0	10	19	2	9	se.	Prof. E. H. Forbes.
Voluntown	New London	260	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frank S. Bitgood.
Waterbury	New Haven	400	36	39.6	− 1.0	67	12	17	23	39	4.48	+ 0.09	1.26	2.0	11	.....	.....	.....	.....	N. J. Welton.
New York.																				
Addison	Steuben	1,000	21	36.8	− 2.3	69	11	17	13	36	0.82	− 1.09	0.22	0.5	10	10	8	12	sw.	Dr. H. R. Ainsworth.
Albany	Albany	97	90	37.6	− 0.8	65	12	20	17	35	1.51	− 1.29	0.63	2.0	13	6	11	13	s.	U. S. Weather Bureau.
Alfred	Allegany	1,976	16	.....	.....	65‡	5†	10*	17	....	2.22	− 0.67	0.49	2.3	13	.....	.....	.....	.....	Prof. F. S. Place.
Amsterdam	Montgomery	277	7	33.8	.....	68	12	12	17†	24	2.26	.....	0.53	5.0	12	8	9	13	w.	Emery Elwood.
Athens	Greene	90	9	38.6	.....	65	12	20	17	40	1.75	.....	0.62	2.0	6	4	10	16	nw.	E. C. Brooks.
Ballston Lake	Saratoga	400	7	35.6	.....	64	12	15	17	31	2.13	.....	0.67	3.8	13	6	8	16	w.	George R. Schauber.
Bedford	Westchester	450	20	39.0	− 2.2	67	12	17	23	34	4.15	+ 0.48	1.30	1.0	11	17	7	6	.....	Dr. L. Rosenberg.
Binghamton	Broome	875	20	35.8	− 1.8	66	11	19	13	39	1.07	− 1.20	0.33	1.3	11	2	5	23	nw.	U. S. Weather Bureau.
Bouckville	Madison	1,350	14	31.8	− 2.5	62	11	4	17	29	2.63	− 0.32	0.38	13.5	17	4	6	20	nw.	L. W. Griswold.
Boyds Corners	Putnam	560	29	.....	.....	.....	.....	.....	.....	.....	4.34	+ 0.72	.....	.....	.....	.....	.....	.....	.....	Thomas Manning.
Carmel	do	500	19	36.0	− 3.6	64	13	15	30	40	4.19	+ 0.68	1.17	3.0	10	16	5	9	nw.	Do.
Chatham	Columbia	470	10	36.8	− 0.3	66	12	16	17	31	1.70	− 0.19	0.50	3.0	11	7	11	12	s.	Morton R. Tauk.
Cooperstown	Otsego	1,250	57	33.2	− 1.8	63	12	8	17	33	3.33	+ 0.29	0.70	6.0	16	11	10	9	s.	Miss Elizabeth C. Keese.
Corinth	Saratoga	542	9	.....	.....	.....	.....	.....	.....	.....	3.09	.....	0.75	.....	8	.....	.....	.....	.....	A. M. Hollister.
Cortland	Cortland	1,129	49	35.8	− 0.4	65	11†	12	13	43	2.56	− 0.58	0.76	4.5	17	4	5	21	nw.	F. G. Baker.
Cutchogue	Suffolk	32	34	42.0	− 1.1	63	7†	24	14†	24	8.28	+ 5.59	1.75	0	11	9	16	5	nw.	William A. Fleet.
De Ruyter	Madison	1,300	8	32.7	.....	65	11	4	17†	35	2.28	.....	0.63	7.8	13	9	5	16	nw.	B. D. Crandall.
Easton	Washington	.....	21	.....	.....	.....	.....	.....	.....	.....	2.03	− 0.61	0.56	5.0	6	.....	.....	.....	.....	H. Taber.
Glens Falls	Warren	340	20	35.2	− 1.1	65	12	11	17	28	2.62	− 0.55	0.67	4.3	12	3	5	22	w.	Prof. C. L. Williams.
Gloversville	Fulton	850	19	32.6	− 2.1	65	12	10	17†	40	3.46	+ 0.17	0.52	11.8	17	5	15	10	w.	W. L. McLean.
Greenfield Center	Saratoga	314	13	34.4	− 1.4	63	12	8	17	29	2.26	− 0.20	0.40	5.0	13	6	10	14	sw.	S. E. Darrow.
Greenwich	Washington	425	14	35.8	− 0.3	66	13	9	17	43	2.62	+ 0.06	0.60	0	11	15	10	5	s.	Homer J. Whitcomb.
Griffin Corners	Delaware	2,260	11	34.7	+ 0.4	64	11	16	17	31	2.41	− 0.10	0.51	9.7	7	9	9	12	w.	Harold O. Judd.
Haskinville	Steuben	.....	16	.....	.....	.....	.....	.....	.....	.....	1.86	− 0.56	0.50	3.8	14	.....	.....	.....	.....	W. G. Collins.
Homer	Cortland	.....	20	33.7	− 2.5	64	11	12	23	30	2.23	.....	0.56	8.3	15	7	2	21	nw.	Charles C. Mortimer.
Hoosic Falls	Rensselaer	410	9	.....	.....	.....	.....	.....	.....	.....	2.30	.....	0.49	4.0	15	15	4	11	w.	Sanford L. Cluett.
Indian Lake	Hamilton	1,705	12	29.2	− 3.4	60	12	1	23	38	4.40	+ 1.64	1.00	35.0	11	12	6	12	n.	Lester Severle.
Jeffersonville	Sullivan	1,240	8	35.3	.....	66	11	12	17†	32	2.95	.....	0.85	5.0	9	7	18	5	se.	Charles Wilfert, jr.
Liberty	do	2,360	29	29.4	− 5.9	60	12	14	16†	45	3.45	+ 0.13	1.60	4.5	4	10	0	20	nw.	Dr. H. M. King.
Little Falls	Herkimer	924	13	32.5	− 2.7	64	11†	6	17	36	1.49	− 1.26	0.27	8.0	11	7	10	13	w.	O. J. Demster.
Mohonk Lake	Ulster	1,245	15	36.4	− 5.3	56	7	19	17	21	1.56	− 1.20	1.10	3.5	6	13	3	14	nw.	O. K. Smiley.
Morehouseville	Hamilton	1,697	3	28.4	.....	57	11	− 1	17	37	7.04	.....	0.97	48.2	18	12	5	13	w.	Theo. C. Remonda.
Morrisville	Madison	1,325	0	33.5	.....	64	12	2	17	42	2.01	.....	0.80	5.5	9	5	7	18	sw.	Prof. I. M. Charlton.
Mount Hope	Westchester	200	14	40.6	− 0.6	65	11	18	25	33	5.85	+ 2.88	1.75	3.0	7	8	15	7	.....	W. A. Cornelius.
Newark Valley	Tioga	825	24	.....	.....	.....	.....	.....	.....	.....	0.91	− 1.49	0.38	2.0	4	.....	.....	.....	.....	Lyman D. Clinton.
New Berlin	Chenango	.....	4	.....	.....	.....	.....	.....	.....	.....	2.80	.....	0.52	.....	11	.....	.....	.....	.....	Roger Greene.
Newcomb	Essex	1,600	0	32.6	.....	60	11	− 2	26	34	2.34	.....	0.70	.....	.....	.....	.....	.....	.....	Edward Spain.
New Lisbon	Otsego	1,234	21	32.0	− 2.1	65	12	2	17	39	2.53	+ 0.01	0.60	5.0	10	5	2	23	sw.	G. A. Yates.
New York City	New York	314	86	41.4	− 2.6	68	12	24	13	36	4.22	+ 0.78	1.42	1.0	11	8	11	11	nw.	U. S. Weather Bureau.
North Creek	Warren	1,002	3	32.7	.....	62	12	12	19†	32	2.47	.....	1.10	.....	5	6	7	17	w.	W. G. Kenwell.
Northville	Fulton	742	9	.....	.....	.....	.....	.....	.....	.....	3.75	.....	0.90	10.0	11	.....	.....	.....	.....	P. C. Picard.
Oneonta	Otsego	1,112	17	35.4	− 2.8	65	12	13	17	32	1.61	− 1.05	0.49	3.2	11	7	5	18	w.	H. W. Lee.
Oxford	Chenango	916	46	35.8	− 0.1	63	11	10	17	32	2.27	− 0.51	0.70	5.0	9	3	12	15	nw.	J. P. Davis.
Oyster Bay	Nassau	40	7	43.8	.....	68	13	24	14	42	3.78	.....	1.15	0	6	20	3	7	sw.	Prof. Thomas Colby.
Port Jervis	Orange	470	27	36.7	− 2.0	65	12	15	23	28	2.78	− 0.19	0.66	4.0	11	11	9	10	w.	Wilbur F. Crane.
Rome	Oneida	445	15	33.2	− 2.9	68	11	2	17	44	3.38	− 0.66	0.98	.....	16	.....	.....	.....	.....	John O'Mara.
Salisbury	Herkimer	1,526	14	29.6	− 5.0	62	11	4	17	28	4.88	+ 1.56	1.04	19.0	14	9	12	9	w.	Joseph Ryan.
Scarsdale	Westchester	200	7	39.4	.....	67	12	20	23†	26	6.41	.....	2.30	2.0	9	17	7	6	nw.	C. H. Wilmarth.
Setauket	Suffolk	40	26	42.4	− 1.7	68	12	25	23	25	6.95	+ 3.10	1.43	T.	10	13	9	8	w.	Selah B. Strong.
Sherburne	Chenango	.....	4	.....	.....	.....	.....	.....	.....	.....	1.20	.....	0.45	4.5	4	.....	.....	.....	.....	E. B. Collins.
Southampton	Suffolk	36	10	43.1	− 1.7	63	12	22	23	33	8.65	+ 6.02	1.98	0	13	5	21	4	nw.	W. L. Jagger.
Southeast Reservoir	Putnam	310	6	.....	.....	.....	.....	.....	.....	.....	3.93	+ 0.57	.....	.....	.....	.....	.....	.....	.....	Thomas Manning.
Spier Falls	Saratoga	400	10	33.7	.....	59	7†	10	17	27	2.25	.....	0.42	4.0	10	5	14	11	sw.	George E. Fifield.
Trenton Falls	Oneida	751	8	.....	.....	.....	.....	.....	.....	.....	5.01	.....	0.92	.....	18	.....	.....	.....	.....	C. W. Young.
Tribes Hill	Montgomery	268	8	.....	.....	.....	.....	.....	.....	.....	1.80	.....	0.40	6.0	7	.....	.....	.....	.....	R. S. Marshall.
Utica	Oneida	537	45	.....	.....	.....	.....	.....	.....	.....	3.27	− 0.64	0.74	.....	12	.....	.....	.....	.....	W. E. Young.
Wading River	Suffolk	112	5	.....	.....	69	12	.....	.....	.....	8.96	.....	1.94	0	11	17	10	3	w.	H. B. Fullerton.
Wappingers Falls	Dutchess	110	21	37.8	− 2.0	69	12	19	17†	30	2.69	− 0.58	0.78	2.5	11	7	16	7	se.	H. C. Townsend.
Warwick	Orange	538	17	.....	.....	.....	.....	.....	.....	.....	3.39	− 0.47	0.93	0.3	9	.....	.....	.....	.....	John W. Sly.
Waverly	Tioga	824	29	35.9	− 2.4	66	11	14	30	37	1.28	− 1.08	0.31	1.4	12	4	11	15	sw.	J. F. Shoemaker.
Wells	Hamilton	1,000	5	31.3	.....	65	12	0	17	32	4.13	.....	1.04	8.5	14	.....	.....	.....	.....	Vernon E. Dewey.
West Berne	Albany	946	12	35.2	− 0.6	66	12	10	17	40	0.95	− 1.59	0.23	3.0	7	4	6	20	se.	W. J. Haverly.
West Point	Orange	167	62	38.3	− 3.6	69	13	20	25	44	5.37	+ 1.42	1.35	.....	9	14	10	6	.....	U. S. Military Academy.
Windham	Greene	1,520	11	34.6	− 1.7	64	12	13	23	37	1.61	− 0.76	0.47	2.7	12	4	23	3	w.	A. R. Mott.
Pennsylvania.																				
Altoona	Blair	1,181	23	41.2	+ 1.6	66	12	16	13	49	1.43	− 0.76	0.46	1.4	6	.....	.....	.....	.....	C. W. Billin.
Bethlehem	Northampton	260	10	40.0*	− 4.1	70	12	18	13	34	2.93	− 0.47	0.82	5.8	9	13	1	16	w.	Prof. E. C. Roest.
Drifton	Luzerne	1,633	13	32.3	− 5.5	58	11†	10	13	35	4.56	+ 1.09	1.50	11.5	11	16	8	6	w.	Eckley B. Coxe, jr.
Emporium	Cameron	1,050	24	35.2	− 4.2	63	11	15	13	39	2.66	− 0.20	0.75	0.5	9	3	10	17	w.	T. B. Lloyd.
Ephrata	Lancaster	384	11	38.2	− 3.9	65	11	17	13	35	3.37	+ 1.39	0.82	T.	9	15	3	12	w.	W. L. Frantz.
Everett	Bedford	1,080	13	38.6	− 1.3	70	11	14	12	51	1.70	− 0.08	0.76	0	5	4	21	5	nw.	B. L. Steckman.
George School	Bucks	184	4	40.4	.....	66	11†	13	13	42	5.68	.....	1.33	0	14	20	4	6	nw.	N. W. Swayne.
Gettysburg	Adams	600	37	39.5	− 0.9	66	11	17	13	30	2.77	− 0.07	0.80	0.5	9	12	7	11	nw.	Col. E. B. Cope.
Gordon	Schuylkill	804	7	37.3	.....	68	11	14	17	38	4.54	.....	0.96	6.0	11	9	13	8	w.	Capt. J. G. Johnson.
Hamburg	Berks	380	15	40.8	− 1.3	77	1	19	20†	44	5.42	+ 2.40	2.25	5.0	7	15	3	12	nw.	W. J. Kalbach.
Harrisburg	Dauphin	361	23	40.2	− 1.5	66	12	21	13	42	2.38	+ 0.03	0.79	3.0	9	9	6	15	nw.	U. S. Weather Bureau.
Huntingdon	Huntingdon	650	23	39.4	− 2.0	68	11	17	13	36	1.91	− 0.57	0.60	1.5	8	5	6	19	w.	Prof. W. J. Swigart.
Hyndman	Bedford	977	4	39.6	.....	72	11	17	14	40	1.82	.....	0.98	T.	6	7	9	14	w.	H. C. Mauk.
Lawrenceville	Tioga	1,006	13	36.4‖	− 2.2	67	11	10	13	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. P. Darling.
Lebanon	Lebanon	458	24	39.7	− 2.3	66	11	20	13	30	3.23	+ 0.10	0.80	1.2	7	10	10	10	nw.	Sowers & Rothermal.
Le Roy	Bradford	1,400	22	34.4	− 3.0	59	11†	14	13	28	1.55	− 1.06	0.40	3.0	16	5	9	16	sw.	G. W. T. Warburton.
Lock Haven	Clinton	560	23	38.2	− 3.3	64	12	18	13	29	1.79	− 0.95	0.68	2.3	6	3	9	18	w.	Prof. J. A. Robb.
Marion	Franklin	640	7	40.4	.....	67	11	18	13	32	2.46	.....	1.02	1.0	9	9	10	11	.....	Hon. C. B. Hege.
Mauch Chunk	Carbon	634	22	37.8	− 2.6	65	11†	16	23	34	4.08	+ 0.59	0.86	7.5	9	16	5	9	n.	F. C. Wintermute.
Mifflintown	Juniata	445	7	39.0	.....	64	11	18	13	32	1.87	.....	0.68	2.0	10	11	6	13	w.	Wellington Smith.
Milford	Pike	455	8	35.8	.....	64	12	12	28	33	2.18	.....	0.75	4.0	9	11	12	7	nw.	Mrs. Alla Doughty.

TABLE 1.—*Climatological data for November, 1911. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Pennsylvania—Contd.																				
Montrose	Susquehanna	1,658	7	35.6	.....	65	12	15	25†	31	1.85	.....	0.55	4.4	6	12	7	11	s.	Silas Jagger.
New Germantown	Perry	873	7	39.4	.....	65	11	17	13	31	2.20	.....	0.80	0.8	5	15	0	15	w.	Ed. C. Johnston.
Philadelphia (1)	Philadelphia	117	40	43.5	− 1.4	71	12	26	13	43	5.58	+ 2.52	1.31	T.	11	7	11	12	nw.	U. S. Weather Bureau.
Pocono Lake	Monroe	1,662	9	34.1	.....	60	12	9	23	36	2.48	.....	0.60	6.0	7	7	0	23	w.	Pocono Lake Ice Co.
Reading	Berks	280	38	40.2	− 2.2	67	11	22	13	41	3.58	+ 0.52	0.89	1.8	10	7	11	12	nw.	Emil L. Nuebling.
Scranton	Lackawanna	805	11	38.0	− 1.1	66	11	21	13	39	1.86	− 0.43	0.64	3.4	8	1	12	17	s.	U. S. Weather Bureau.
Selinsgrove	Snyder	455	23	38.9	− 2.7	61	11†	18	13†	43	2.11	− 0.72	0.86	2.0	10	0	25	5	sw.	J. M. Boyer, C. E.
State College	Center	1,191	23	36.5	− 3.0	64	11	13	13	39	2.28	− 0.33	0.69	1.5	12	.....	.....	.....	w.	Prof. Wm. Frear.
Towanda	Bradford	754	16	36.8	− 2.2	65	11	19	13†	30	0.99	− 1.15	0.26	T.	8	4	11	15	nw.	Hiram E. Bull, C. E.
Wellsboro	Tioga	1,327	34	35.5	− 2.2	63	11	15	13	32	1.92	− 1.13	0.53	T.	7	11	14	5	w.	O. L. White.
West Chester	Chester	455	57	40.6	− 2.1	67	12	21	13	36	4.84	+ 1.02	1.12	0.1	13	12	6	12	w.	J. C. Green, D. D. S.
Williamsport	Lycoming	530	21	38.6	− 1.7	68	11	18	13	25	1.82	− 0.46	0.65	0.7	9	13	5	12	nw.	Henry H. Guise.
New Jersey.																				
Asbury Park	Monmouth	22	23	43.6	− .6	67	7	23	14	40	5.57	+ 2.30	1.30	T.	11	8	12	10	nw.	B. H. Obert.
Atlantic City	Atlantic	16	38	44.0	− 1.5	66	7	24	14	33	5.86	+ 2.63	1.29	0	13	9	11	10	nw.	U. S. Weather Bureau.
Bayonne	Hudson	50	21	42.2	− .8	73	12	24	14†	26	5.29	+ 1.76	1.62	1.0	10	8	11	11	w.	Erskine R. Eadie.
Belvidere	Warren	289	20	39.5	− 1.7	68	12	19	23	32	5.03	+ 1.54	1.60	5.0	9	8	11	11	.....	Samuel J. Hixson.
Bergen Point	Hudson	37	14	41.5	− 1.5	71	12	22	23	30	5.39	+ 1.81	1.63	0.5	11	8	10	12	nw.	Dr. Wm. H. Mitchell.
Boonton	Morris	413	21	.....	.....	.....	.....	.....	.....	.....	4.92	+ 1.25	1.42	4.0	10	.....	.....	.....	.....	Foster Peer.
Bridgeton	Cumberland	30	30	43.6	− 1.3	70	7†	22	23	32	5.18	+ 1.92	1.10	0	9	10	9	11	nw.	Henry A. Jorden.
Burlington	Burlington	12	27	.....	.....	.....	.....	.....	.....	.....	6.41	+ 2.67	1.83	0	9	8	12	10	nw.	D. S. B. McCoy.
Canton	Salem	24	17	.....	.....	.....	.....	.....	.....	.....	5.07	+ 1.74	1.03	0	8	10	9	11	.....	John H. Maskell.
Cape May City	Cape May	17	27	45.0	− 2.4	63	12	26	14	30	5.93	+ 2.71	1.61	0	15	7	14	9	nw.	U. S. Weather Bureau.
Charlotteburg	Passaic	719	19	37.8[a]	− 2.7	66[a]	12	15[a]	23	44[a]	.....	.....	.....	4.0	.....	8	11	11	nw.	George S. Briggs.
Chatham	Morris	234	9	.....	.....	.....	.....	.....	.....	.....	5.10	.....	1.45	2.5	10	.....	.....	.....	.....	M. A. Butler.
Clayton	Gloucester	126	18	43.5[a]	+ .1	72[a]	11	20[a]	23	41[a]	.....	.....	.....	0	.....	8	13	9	nw.	William T. Farley.
College Farm	Middlesex	100	16	41.6	− 1.9	72	12	19	23	44	4.60	+ 1.13	1.15	1.0	9	10	10	10	nw.	George B. Thrasher.
Culvers Lake	Sussex	848	10	.....	.....	.....	.....	.....	.....	.....	3.63	+ 0.81	0.90	4.0	9	7	13	10	w.	Brice E. Riker.
Dover	Morris	600	27	37.0	− 3.3	65	12	17	23	29	4.91	+ 1.28	1.32	3.7	8	5	13	12	.....	William C. Harris.
Elizabeth	Union	33	32	41.4	− 2.2	71	12	20	23	26	5.21	+ 1.87	1.50	2.0	9	9	11	10	w.	William M. Oliver.
Flemington	Hunterdon	187	23	40.7	− 2.1	70	12	20	23	37	4.84	+ 1.49	1.37	3.0	8	8	10	12	w.	Hiram E. Deats.
Haddonfield	Camden	73	24	42.1	− .5	70	12	21	23	32	6.36	+ 3.04	1.58	0	12	8	12	10	nw.	Charles F. Richardson.
Hammonton	Atlantic	103	13	.....	.....	.....	.....	.....	.....	.....	5.71	+ 1.99	1.20	0	11	.....	.....	.....	.....	Orville Bassett.
Hightstown	Mercer	119	19	41.9	− 1.7	73	12	19	23	44	5.41	+ 1.75	1.33	0	8	7	12	11	nw.	Ernst Wenger.
Highwood	Bergen	90	.....	40.7	.....	72	12	18	23	40	5.40	.....	1.42	2.0	9	7	13	10	nw.	Charles J. Bates.
Indian Mills	Burlington	76	22	42.3	− 1.1	72	12	16	23	45	5.58	+ 1.98	1.20	0	11	9	9	12	nw.	James Armstrong.
Jersey City	Hudson	15	13	42.0	− 1.6	70	12	25	13†	28	5.23	+ 1.83	1.48	1.0	10	8	12	10	nw.	Samuel K. Pearson, jr.
Lakewood	Ocean	54	9	42.0	.....	70	12	19	23	31	5.46	.....	1.27	0	12	7	10	13	nw.	Ralph Robertson.
Lambertville	Hunterdon	95	25	41.6	− 1.4	70	12	20	23	45	5.57	+ 1.96	1.46	1.5	8	8	11	11	nw.	William R. Bowne.
Layton	Sussex	550	12	37.0	− 1.4	65	12	13	23	34	.....	.....	.....	4.5	.....	8	10	12	n.	Warren C. Hursh.
Little Falls	Passaic	175	8	.....	.....	.....	.....	.....	.....	.....	4.95	.....	1.45	3.8	9	.....	.....	.....	.....	A. Sweetman.
Long Branch	Monmouth	30	4	43.6	.....	68	12	22	14†	43	5.89	.....	1.33	T.	10	8	13	9	nw.	Benjamin B. Bobbitt.
Mahwah	Bergen	312	9	.....	.....	.....	.....	.....	.....	.....	4.55	.....	1.25	3.0	8	.....	.....	.....	.....	Charles L. Barker.
Moorestown	Burlington	71	49	42.5	− .5	71	12	20	23	33	5.86	+ 2.44	1.28	T.	11	7	12	11	nw.	John C. Beans.
Newark	Essex	140	68	41.8	− 1.1	73	12	23	23	32	6.34	+ 2.84	2.72	3.5	9	9	10	11	nw.	Prof. William Wiener.
New Brunswick	Middlesex	61	58	41.8[e]	− 1.8	72[e]	12	18[e]	23	45[e]	5.07	+ 1.48	1.25	1.0	9	.....	.....	.....	.....	William T. Woerner.
Newton	Sussex	678	32	.....	.....	66	12	.....	.....	.....	3.17	+ 0.23	1.05	5.5	8	10	8	12	w.	F. Vernon Losee.
Northfield	Atlantic	.....	4	.....	.....	.....	.....	.....	.....	.....	5.61	.....	1.23	0	14	.....	.....	.....	.....	William L. Flick.
Paterson	Passaic	80	40	40.4	− 2.9	72	12	20	23	43	4.97	+ 1.71	1.45	2.4	9	7	12	11	nw.	Heber A. Probert.
Phillipsburg	Warren	363	14	38.6	− 3.0	67	12	20	23	40	4.25	+ 0.97	1.14	6.0	9	8	13	9	w.	D. W. Smith.
Plainfield	Union	100	25	40.6	− 1.4	73	12	19	23	32	4.29	+ 0.70	1.38	1.5	8	10	9	11	nw.	John Neagle.
Pleasantville	Atlantic	26	13	.....	.....	.....	.....	.....	.....	.....	5.91	+ 2.55	1.36	0	12	10	9	11	.....	Lincoln Van Gilder.
Pompton Plains	Morris	195	9	.....	.....	.....	.....	.....	.....	.....	4.69	.....	1.32	4.0	10	.....	.....	.....	.....	M. S. Taylor.
Somerville	Somerset	76	28	40.6	− 1.6	72	12	19	23	32	5.00	+ 1.61	1.27	2.0	11	8	9	13	w.	Peter Hardcastle.
South Orange	Essex	200	41	40.2	− 1.4	71	12	21	23	31	5.09	+ 1.72	1.57	2.0	9	9	10	11	w.	Dr. William J. Chandler.
Sussex	Sussex	442	21	38.4	− 2.1	70	11	18	23	32	3.71	+ 0.65	0.95	3.0	9	11	8	11	nw.	George Dymock.
Tuckerton	Ocean	23	18	42.1	− 1.9	68	7	18	17	35	6.50	+ 3.04	1.32	0	13	9	12	9	nw.	Frank R. Austin.
Woodbine	Cape May	43	20	43.2[d]	− .8	.....	.....	18[d]	23	33[e]	5.16	+ 2.01	1.24	0	9	.....	.....	.....	.....	W. S. Tarbox.
West Virginia.																				
Bayard	Grant	2,500	10	36.0	− 1.8	72	11	7	13	45	2.76	+ 0.44	0.94	8.8	12	12	3	15	w.	Solomon Clark.
Burlington	Mineral	875	17	39.8	− 2.6	73	11	16	13	40	1.45	− 0.41	1.00	T.	2	7	16	7	nw.	J. W. Vandiver.
Franklin	Pendleton	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. A. Martin.
Lost City	Hardy	.....	5	39.3	.....	64	12	14	13	30	1.95	.....	0.90	T.	5	15	7	8	w.	B. D. Hinegardner.
Martinsburg	Berkeley	435	19	40.9	− 1.9	69	11	18	13†	30	2.20	+ 0.03	1.05	0	6	16	8	6	nw.	G. W. Van Metre, C. E.
Moorefield	Hardy	900	15	43.6	+ 0.8	79	11	16	13	46	1.27	− 0.39	0.79	T.	3	5	18	7	nw.	John C. Fisher.
Romney	Hampshire	824	14	39.5	− 2.7	75	11	16	13	42	2.19	+ 0.20	0.90	T.	6	10	13	7	w.	John C. Linthicum.
Upper Tract	Pendleton	1,230	14	40.5[a]	− 3.1	70[a]	11†	13[a]	13	37[a]	1.51	− 0.17	1.08	0	4	2	15	13	w.	J. M. Mallow.
Maryland.																				
Annapolis	Anne Arundel	45	33	47.0	+ 0.3	69	7	23	13	32	2.61	− 0.57	0.79	0	7	20	0	10	nw.	U. S. Naval Academy.
Baltimore	Baltimore	115	41	43.8	− 2.0	71	12	22	13	44	4.28	+ 1.36	1.35	T.	11	8	13	9	sw.	U. S. Weather Bureau.
Cambridge	Dorchester	25	13	47.3	− 0.4	73	13	25	13†	48	5.55	+ 2.91	1.40	T.	9	19	5	6	nw.	T. E. Keenan.
Cheltenham	Prince Georges	230	11	43.6	.....	70	12	20	14	33	4.86	.....	0.80	T.	10	8	12	10	nw.	George Hartnell.
Chestertown	Kent	80	26	44.8	− 0.6	77	1	23	13	40	5.23	+ 2.36	1.20	T.	10	10	14	6	nw.	M. W. Thomas.
Chewsville	Washington	530	14	40.6	− 2.3	67	11	18	13	30	2.25	+ 0.29	0.89	T.	7	10	15	5	nw.	D. Paul Oswald.
Clear Spring	....do	650	14	39.2	− 2.9	69	11	17	13†	32	2.63	+ 0.43	1.32	0.2	9	12	11	7	w.	W. W. Frantz.
Coleman	Kent	80	13	44.6	.....	69	12	23	13	31	5.51	+ 2.85	1.26	T.	10	14	5	11	nw.	J. S. Harris.
College Park	Prince Georges	170	21	41.4	− 3.7	64	7†	20	23	33	4.59	+ 1.48	0.98	T.	9	14	8	8	nw.	Prof. H. J. Patterson.
Cumberland	Allegany	700	37	.....	.....	.....	.....	.....	.....	.....	1.87	− 0.44	0.90	0	9	.....	.....	.....	.....	J. W. Frantz.
Darlington	Harford	300	19	41.2	− 2.6	66	7†	20	13†	39	4.60	+ 1.61	0.93	T.	10	9	13	8	nw.	Prof. A. F. Galbreath.
Denton	Caroline	42	16	44.1	− 2.4	70	12	22	14†	30	4.70	+ 1.72	1.15	0	10	18	3	9	nw.	H. B. Mason.
Easton	Talbott	35	20	45.2	− 0.7	69	12	25	13†	42	4.47	+ 1.84	1.08	0	11	11	12	7	nw.	Henry Shreve.
Emmitsburg	Frederick	720	38	41.0	− 1.7	67	11	18	13	45	3.71	+ 0.31	1.16	T.	6	19	5	6	sw.	Joseph M. Sheridan.
Fallston	Harford	450	41	41.5	− 1.7	66	7	20	13	24	4.55	+ 1.08	0.80	T.	10	0	22	8	w.	J. H. Curtiss.
Frederick	Frederick	275	34	41.1	− 3.0	67	11	20	13	32	3.11	+ 0.49	1.00	T.	11	17	4	9	ne.	Charles S. Birely.
Frostburg	Allegany	1,929	10	38.4	.....	74	11	16	13	37	2.49	.....	1.39	0.9	10	10	12	8	nw.	R. A. Walter.
Great Falls	Montgomery	200	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. W. Bissett.
Green Spring Furnace	Washington	450	19	40.8	− 1.7	68	11	18	13	33	2.48	+ 0.23	1.08	T.	9	14	8	8	w.	E. G. Kinsell.
Keedysville	....do	400	7	41.8	.....	69	11	16	30	31	2.23	.....	0.82	T.	9	14	5	11	nw.	J. A. Miller.
Lake Montebello	Baltimore	200	2	42.5	.....	69	12	22	13	32	4.44	.....	1.38	T.	9	14	4	12	nw.	Martin L. Dobler.
La Plata	Charles	190	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. R. Lee Reich.

TABLE 1.—*Climatological data for November, 1911. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Maryland—Contd.																			
Laurel	Prince Georges	150	17	41.8	− 3.2	71	12	19	23	32	4.55	+ 1.97	1.00	0	9	5	18	7	.....	Dr. T. M. Baldwin.
Leonardtown	St. Marys	100	1	45.6	.....	67	7†	24	13	34	4.78	.....	1.71	0	10	17	7	6	n.	Brother Fidelis.
Monrovia	Frederick	630	24	41.2	− 2.3	68	11	18	13	27	3.44	− 0.03	0.60	T.	11	15	2	13	nw.	J. H. Lawson.
Pocomoke City	Worcester	37	18	46.8	− 3.2	70	12	27	14†	28	5.30	+ 2.95	1.14	0	13	14	10	6	sw.	Hon. R. M. Stevenson.
Porto Bello	St. Marys	38	6	45.5	.....	82	18	20	14	42	6.40	.....	1.80	T.	6	22	1	7	nw.	Mrs. Clara C. Hyatt.
Princess Anne	Somerset	17	18	43.4	− 3.0	70	12	21	23	36	5.37	+ 3.11	1.43	0	10	7	15	8	nw.	J. R. Stewart.
Rockville	Montgomery	421	4	42.6	.....	68	7†	20	13	28	3.81	.....	1.12	T.	10	13	3	14	.....	Dr. George E. Lewis.
Salisbury	Wicomico	23	6	45.9	.....	72	12	22	14	42	8.85	.....	1.94	0	14	10	17	3	nw.	W. E. Downing.
Solomons	Calvert	20	20	46.4	− 2.2	69	12	25	13	31	3.12	+ 0.93	0.92	T.	11	6	11	13	nw.	Dr. W. H. Marsh.
State Sanatorium	Frederick	1,460	3	39.1	.....	66	11	14	13	27	2.67	.....	0.82	T.	9	10	9	11	w.	Joseph V. Shimek.
Sudlersville	Queen Anne	65	12	43.6	− 2.3	69	12	23	23	29	5.67	+ 3.12	1.21	0	12	9	13	8	w.	Jas. E. Higman.
Takoma Park	Montgomery	320	13	41.6	− 3.1	68	11†	22	13†	29	4.10	+ 2.01	1.05	T.	12	3	20	7	.....	L. M. Mooers.
Taneytown	Carroll	450	12	41.0	− 2.5	66	11	19	13	33	3.43	+ 0.51	0.89	0	6	12	14	4	s.	James B. Galt.
Towson	Baltimore	465	3	42.0	.....	67	11†	20	13†	26	4.20	.....	1.24	T.	9	12	5	13	nw.	C. W. E. Treadwell.
Van Bibber	Harford	100	14	42.6[a]	− 1.4	69[a]	12	21[a]	23	34[a]	4.58	+ 1.48	2.00	0	4	2[a]	19[a]	8[a]	.....	W. Benjamin Ford.
Westernport	Allegany	1,000	17	40.8	− 1.2	73	11	15	13	36	2.03	+ 0.22	1.35	0.2	4	.....	.....	.....	.....	Prof. O. H. Bruce.
Westminster	Carroll	860	18	41.0[a]	− 0.9	68[a]	11	17[a]	13	29[a]	2.84	− 0.52	0.94	T.	9	17[a]	5[a]	7[a]	nw.	Prof. Geo. F. Morelock.
Woodstock	Baltimore	392	37	44.5	+ 1.7	69	12	20	13	34	5.93	+ 2.95	0.90	T.	16	10	6	14	nw.	Rev. James F. Dawson, S. J.
Delaware.																				
Delaware City	New Castle	20	9	43.8	.....	71	12	23	13	32	4.50	.....	1.16	0	8	17	6	7	nw.	H. Morton Price.
Dover	Kent	40	23	44.4	+ 1.1	72	12	24	13†	31	5.20	+ 1.80	1.21	0	7	14	10	6	w.	Thomas F. Dunn.
Milford	do	20	27	45.4	− 0.1	72	12	23	23	45	5.77	+ 2.63	1.52	0	13	13	9	8	nw.	Chas. J. Holzmueller.
Millsboro	Sussex	20	19	44.2	− 2.3	71	12	20	23	36	6.16	+ 3.49	1.80	0	12	14	8	8	sw.	Rev. L. W. Wells.
Seaford	do	40	18	45.5	− 0.7	71	12	23	14†	44	4.91	+ 2.27	1.30	0	13	16	6	8	nw.	E. B. Brown.
District of Columbia.																				
Washington	Dist. of Columbia	112	41	42.8	− 2.2	70	12	22	13	42	3.85	+ 1.14	0.95	T.	9	8	11	11	nw.	U. S. Weather Bureau.
Virginia.																				
Culpeper	Culpeper	450	3	41.4	.....	67	7	20	13†	32	3.19	.....	1.14	0	8	10	13	7	nw.	Col. H. C. Burrows.
Dale Enterprise	Rockingham	1,350	32	40.0	− 3.8	69	12	12	13	40	2.79	+ 0.63	1.50	T.	10	8	13	9	s.	Rev. L. J. Heatwole.
Eastville	Northampton	15	1	50.2	+ 0.3	75	12	26	14	40	4.91	+ 2.05	1.10	0	12	10	13	7	nw.	T. B. Robertson.
Fredericksburg	Spottsylvania	100	22	46.4	− 0.1	73	12	21	13	35	4.12	+ 1.84	1.14	0	9	14	8	8	nw.	S. G. Howison.
Lincoln	Loudoun	500	10	42.0	− 2.2	68	2†	18	13	36	2.89	+ 1.04	1.48	T.	9	12	8	10	nw.	Dr. Geo. Roberts.
Mount Weather	do	1,726	7	37.5	− 2.9	61	11	13	13	42	2.43	− 0.43	0.97	T.	10	8	8	14	nw.	U. S. Weather Bureau.
Onancock	Accomac	20	14	.....	.....	70	12	.....	.....	.....	5.24	.....	0.94	0	13	14	4	12	nw.	S. F. Rogers.
Quantico	Prince William	16	14	42.6	− 2.1	66	8	21	13	35	2.20	.....	1.14	0	6	15	4	11	nw.	R. F. & P. R. R.
Staunton	Augusta	1,380	19	42.5	− 2.9	72	11	16	13	31	2.73	+ 0.59	1.32	T.	9	14	6	10	sw.	Ernest Nothnagle.
Woodstock	Shenandoah	927	15	41.9	− 2.8	74	11	16	13	38	2.08	+ 0.19	0.95	T.	8	13	9	8	w.	Mrs. A. G. Artz.

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1911. District No. 1, North Atlantic States.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Maine.																																
Ashland	St. John																															
Bar Harbor	Coast	.05	.15				.10	1.30			.05			.20		1.60	T.		.90						.60	.20			.40	.90		6.65
Cornish	Saco	.02	.05				.56	.25	T.		.03		.46	T.		.90			.58						.45				.48			3.78
Danforth	Penobscot		.05					.40	.10		T.			.50		.77			.25						.10	.30			T.	1.80		4.27
Eastport	Coast	.07	.17				.07	.64			T.		T.	.23	.02	.68	.01		.36			.04			.66	.27	T.		.33	.28	T.	3.83
Eustis	Kennebec	.07	.06	T.				.29	.14	T.	T.	.03		.51	T.	.59	.02	T.	.35	.04	.01	T.	T.	T.	.03	T.	T.			.46	T.	2.60
Fairfield	do							.54					.14			.78			.37						.42				.56			2.81
Farmington	do	.01	.06					.77	.01		.04			.40		.90			.40						.20	.11			.10	.40		3.40
Gardiner	do	.05	.04					.71			T.			.39		1.09			.47						.31	.20				.50		3.76
Greenville	do	.04	T.	T.			.10	.32	.01		.12		1.18		T.	.70	T.		.33	.12			T.		.20		T.		.68	.06	T.	3.86
Houlton	St. John							.40			T.		.70			.30			.10						.15				1.00			2.65
Howe Brook	Penobscot						1.20	.50						.85		.80									.40				.40	.40		4.55
Lewiston	Androscoggin	T.	.04				.06	.60			.01			.25		1.20			.42						.44	.01			.07	.32		3.42
Madison	Kennebec							.77			.04			.46		.33	.40		.49						.41				.77			3.67
Millinocket	Penobscot			T.				.25	.30			.10		.67	*	1.07			.44	.03	T.					.25			*	1.25		4.36
North Bridgton	Saco		.20					.72			.02	T.		.31		.90									.36				.70			3.21
Oquossoc	Androscoggin		.30					.25						.10			1.30	.20	.40	.10					.30				.60			3.55
Orono	Penobscot	.14		.03				.33	.04			.40		.40		.64			.45						.27					.58		3.28
Patten	do	T.		.10				.60	T.		.02			T.	1.45	.01			.12	T.					.10					1.62		4.02
Portland	Coast	.02	.01				.20	.47			.03		.11	.03	.04	1.22			.64						.53				.16	.05		3.51
Presque Isle	St. John																															
Rumford Falls	Androscoggin	T.	.13				.21	.39			.03		.50	T.	T.	.79	.01		.27						.19				.35	.01		2.88
The Forks	Kennebec	.50						1.00						.95		.90								.75					1.00			5.10
Winslow	do		.02					.50			.07		.25			.78			.40						.45					.57		3.04
New Hampshire.																																
Alstead Center	Connecticut	.02	.02				T.	.60			T.		T.	.43		.55	T.		.46		.02	.08			.33	T.			.01	.28		2.80
Benton	do						.80				.08			.06		.08	.03	.42	1.28	T.						.03			.67		T.	3.45
Bethlehem	do	.11	.03	T.				.11			.06		T.	.92		.55	.05		.48			.02	T.		.21	T.	.15		.09	.18	T.	2.96
Brookline	Merrimack	.05	T.				.85	T.					.25		.95		T.		.90		T.				.55							3.55
Concord	do	.03	.01				.38	.24			.03		.38		.21	.57	.02		.60		T.	T.			.38	T.	T.		.06	.06		3.03
Durham	do	.06						.87						.32					1.05						.67				.19			3.16
Franklin	do	.02					T.	.68			.05	.01	T.	.53		.81	.01		.57	T.		T.			.33	T.	T.		T.	.38		3.39
Grafton	do																															
Hanover	Connecticut						.07	.27	.01		.02		.24	.07		.45	.04		.45			.09			.10				.15	.04		2.00
Keene	do	T.	.01					.53			.01		T.	.40		.65			.65	T.	.01	.10			.34		T.		T.			2.70
Nashua	Merrimack	.02	.06				.21	.53			.03		.30		.12	.88			.85		.01				.60	T.			.11			3.72
Newton	do	.05	T.				.56	T.			.05		.43			1.07	T.		.89	T.	T.				.92				.13			4.10
Plymouth	do	T.	T.					.69			T.	.03	T.	.35		.64	T.		.67	T.		T.			.24		T.		.15	.38		3.15
Vermont.																																
Bloomfield	Connecticut	.04	.01					.11	.09					.51		.43	.09		.26	.05					.04		.03		.04	.04		2.10
Cavendish	do																															
Chelsea	do		T.				.18	.23			.05		.45	.08		.16			.18						.08		T.		.14			1.55
Jacksonville	do			.10			.80				.15	.35		.15		.01	.02	.01	.10		.01	.01		.10	T.	T.	T.	T.	T.			1.81
Manchester	Hudson	.09	T.				*	.21			T.	*	.51			.43			.47	T.	T.	T.			.12				T.			1.83
Pecks Pond	Connecticut		.10				.57	.39			.16		.66			.51				.03	.20				.39		.03	.47				3.51
St. Johnsbury	do	T.	.02	T.				.20	.24		.02	.02		.66	.03	.49	.04		.47	T.	T.	T.			.11	T.	.03	T.	.01	.16	T.	2.50
Vernon	do						.47	.26			.05		.37			.70			.70			.02			.41				.20			3.18
Woodstock	do						.58				.08		.47		.34	.02		.49				.10		.05	.03				.15			2.31
Massachusetts.																																
Amherst	Connecticut	.27					.44	.23		.01	.09		.41		.38	.40	T.		.88		.05	T.			.63				.05			3.84
Ashland	Merrimack	.05					.36				.14		.44			.86			1.02		.03				1.23				.48			4.61
Bakers Bridge	do	.30						.33			T.			.55		.97			.94		T.				.77	.13				.15		4.14
Bedford	do	.24	.04				.06				.11			.48		.96			.87		T.	T.			.92	.05			.06	.11		3.90
Blue Hill	Coast	.24	T.				.09	.38			.11		T.	.60		.84	T.		1.49		.02	.07			1.03	.06			.12	.66		5.71
Boston	do	.16	T.				.16	.17			.09		.48	T.	.08	.70	T.	T.	1.01		T.	.01			.85				.58			4.29
Chestnut Hill	do	.05	T.				.35			.03	.10		.50		.85			.66	.35		.03	T.		.06	.77		T.		.65			4.40
Clinton	Merrimack	.06	.04					.28			.09		.09			.90			.65		.03				.39				*	.06		2.59
Concord	do	.22	.02				T.	.36			.05			.39		.96	T.		.94		T.	T.			.86	.09			.02	.18		4.09
Fall River	Coast	.45					.30	1.00			.05		.65		.20	.75			1.40		.05	.07			1.00	.02			.85	T.		6.79
Fitchburg	Merrimack	.02	.03				.04	.71			.06		.14	.06		.87			.89		.04				.50	T.			T.	.05		3.41
Framingham	do	.05						.35			.13		.51			.91			.97		*	.03			*	1.06			.38			4.39
Haverhill	do	.11	.08					.33			.04	T.		.32		.97	T.		.85			.01			.60	.32			T.	.09		3.72
Hingham	Coast	.40	T.					.73			.03		.62		T.	.84			1.46		.06				1.21				.81			6.16
Hyannis	do	.64					*	.80			.14	.01	*	.42		.88			.78		*	.27			.90	.17			*	.71		5.72
Jefferson	Merrimack	.14						.63			.09		.40			.90			.94		.08				.75				.18			4.11
Lake Cochituate	do	.06					.34				.10		.40			.82			.95		*	.02			1.17				.42			4.28
Lawrence	do	.09	.06				*	.34			.04		.22		*	1.01	T.		.88		T.	T.			.91	T.			.13			3.68
Leominster	do	.05	.01				.10	.75			.04		.20	.06		.97			.93		.03				.62				.02	.06		3.84
Lowell	do		.11					.47			.04		.30			.94				.83					.80				.08			3.57
Middleboro	Coast	.36	.01					.96			.09		.79			.93			1.43		.05	.13			.82	.35			.88			6.80
Monson	Connecticut	.10					.20	.35			.05		.50	.08		.68			.93		.02	.08			.94				.15	.08		4.16
Nantucket	Coast	.49	T.			.17	.16	.64			.17		.31	.08	.06	.82	T.		1.00	T.	.16	.13			1.43	.12			.55	.01		6.30
New Bedford	do	1.02					.85						.30			1.25			1.06			.08			.63				*	.98		6.17
Norfolk	do	.53	T.					.37			.43			.45		.90			1.40		T.				.60				T.	.78		5.46
Plymouth	do	.31						.84			.08			.48		1.11			1.50		T.	.13				1.38				.85		6.68
Princeton	Merrimack		.02					.77			.13		.45			.75			.86		.06				.65				.18			3.87
Provincetown	Coast	.42									.16			.15		.46			1.05			.12			.43	.33			.12	.26		3.50
Rockport	do	.40	.20					.60			.12			.05		1.10			1.25						.75	.60				.60		6.27
Rutland	Connecticut	.07					.71			.02	.02		.43	*	.85				.92		.05			.80					.19			4.06
Somerset	Coast	.05					1.02				.14		.54		*	.73		*	1.55		*	.22			1.21				.78			6.24
South Egremont	Housatonic						.45	.10		.02	.03		.50			.74	.56	.16			.14			.24			.21		.20			3.35
Spot Pond	Coast	.08	.02				.34				.08		.37		.78	.10		.48	.43		.02			.02	.92					.38		4.02
Springfield	Connecticut		T.					.88	T.		.03		.55			.72			.97		.08	T.			.97				.08			4.28
Sterling	Merrimack	.06	T.					.65			.06			.95		.94			.95			T.			.64				.16			4.41
Taunton	Coast	.32	T.				*	1.05			.10		.91			1.00			1.70		*	.14			*	1.43			*	1.20		7.85
Turners Falls	Connecticut	.26	T.					.56	T.		.14		.53		T.	.96			.67			.14			T.					.26		3.52
Westboro	Merrimack		.20					.42			*	.10			.50	.93			1.05			.03			*	.95			*	.25		4.43
Williamstown	Hudson		.07				.22	.17			.10		.42	.04		.20			.08	T.	.04	.07			.34		.02		.07	.09		1.98
Winchendon	Connecticut	.11	.04				.05	.32			.05		.28	.06		.90			.88		.08				.52					.08		3.37
Worcester	Coast	T.	T.				.12	.37			.10		.62			.37	T.		.49		.05	.01			.59				.46	.09		3.27

TABLE 2.—*Daily precipitation for November, 1911. District No. 1*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Rhode Island.																																
Block Island	Coast	1.06				.01	.46	.36		.01	.08		.45		.24	.82			.66		.01	.20			.83	.01			.86			6.06
Bristol	do	*	.27				*	1.24			.09		.77		*	.77			1.37		*	.21			.73	.52			.88			6.85
Greene	do		.25					.82			.14		.55			.80			1.65							1.35			.75			6.31
Hope Valley	do	.35					T.	1.60			.15			.61		.90			1.89		T.	.20			1.80				.08	.90		8.48
Kingston	do	.66						.12	1.55		.13		1.00		.08	.95			1.62		.21	.12			1.47				1.08			8.99
Narragansett Pier	do	1.36	.02				.10	1.20			.07			.69		1.03			1.07		.15	.11			1.04	.08			.40	.60		7.92
Pawtucket	do	.20	T.					.79			.11		.51			.72			1.66			.10				1.17				1.02		6.28
Providence	do	.22	T.				.25	.62		T.	.14		.38		.10	.63		T.	1.27		.02	.06			1.26	.01			.65			5.61
Wallum Lake	do		T.				.55				.12		.50		.85	T.			1.50		.02				1.20				.65			5.59
Connecticut.																																
Bridgeport	Coast	.04	T.				.19	1.05		T.	.06		.18	.09	T.	.92			1.53		T.				1.23				.37	.08		5.74
Canton	Connecticut	.02					.98			T.	.02		.37			.73			1.15		T.				.67				.14			4.08
Colchester	Coast		T.				.35	.70			.12	T.		.35		1.05			1.88		.11				1.42				*	.99		6.97
Cream Hill	Housatonic		T.				.32	.19				.09	.29	.23	.17	.41	.20	.20	1.10		.15				.65		.01		.01			4.02
Danielson	Coast							.23			.90		.45			.70			2.70		.10				1.10				1.05			7.23
Falls Village	Housatonic	.14					.52	.03			.02		.59		.52	.20	.01		.08		.07				.64		.01		.10			3.93
Hartford	Connecticut	.06	T.				.44	.21	T.	T.	.04		.44		.15	.67	T.	.01	1.22		.01	T.			.80				.13			4.18
Hawleyville	Housatonic						.19	.91			.08	.02				.85			1.24						1.00				.04	.14		4.47
Lake Konomoc	Coast							1.50						1.20		1.15			1.83			.20			.47	.95				1.10		8.40
New Haven	do	.06	T.				1.00	.42		T.	.09		.33		.25	.58	T.	.01	1.70		.02				1.22				.72			6.40
New London	do						.15	1.25			.12			.50		.65			1.20		.05				1.60	.20				.80		6.52
N. Grosvenor Dale	do	.13	.04					.20					.52			.66			.65		.03				.65				.30	.03		3.21
Norwalk	do	.02					*	1.14			.08		.20		*	.92			1.74						.90				.42			5.42
Southington	do	.05					T.	.80			.05	T.	T.	.20		.85			1.30						.80	.10			T.	.20		4.35
South Manchester	Connecticut						.60						.71		*	.79		*	.72						*	1.31			.22			4.35
Storrs	Coast		T.					.55			.04					.93		*	1.45			.01			.90	.22			*	.29		4.39
Torrington	Housatonic	.05		T.				.60			T.	T.		.01		.61			1.05	.20		.02			.40	.24				.06		3.24
Wallingford	Coast						1.23			.07	.05		.38		.90			1.94	.20		.03			.77				.57			6.64
Waterbury	Housatonic	.09					*	.88			.06	.03	.35			.87			1.26		.01				.82				.11			4.48
West Simsbury	Connecticut	T.	T.				*	.94		T.			.30			.73	T.		1.03		.02	.01			.65				.15			3.83
New York.																																
Addison	Susquehanna	.01	.02				.13	T.	.07	T.	T.		.18		T.	T.	.04	.06	.22	T.	.03	T.			.06	T.			T.	T.		0.82
Albany	Hudson	T.	.02	T.			.16	.06		T.	.02	T.	.63		.02	.10		T.	.16	T.	.02	.05			.21		.03		.03	T.		1.51
Alfred	Susquehanna	.01	.02					.49	.10		.07		.34			.50	.10		.40	.10	.05	.02							.02			2.22
Amsterdam	Mohawk	.02	.07	T.			.21	.16			.17		.38	.16		.21	T.		.53	T.	.11				.19		.05			T.		2.26
Athens	Hudson	T.	T.	T.			.24	T.			T.		.62			.38	T.	T.	.26		T.	T.			.21		.04		T.			1.75
Bainbridge	Susquehanna					.11		.07						.48		.26		.57							.13	.07				.04		1.73
Ballston Lake	Hudson	T.	.05	T.			.18	.21	T.		.05	.02	*	.67		.16	T.		.47	T.	*	.10			.21		.01		T.	T.		2.13
Bedford	Coast	.06					.21	.78			.06			.26		.46			1.30			.02			.84				.10	.06		4.15
Binghamton	Susquehanna		.01				.24	T.			.01	T.	.24		.09		T.	.02	.31	T.	.02	.01	T.	T.	.11	.01	T.		T.	T.		1.07
Bouckville	do	.04	.20	.10			.15	.25	.02		.02		.17	.20		.30	.20		.38		.05	.05			.35	.05	.10			T.		2.63
Carmel	Hudson	.12						.81			.02	.03		.32		.78			1.17						.42	.38				.14		4.19
Chatham	do						.03	.03						.50		.31	.01		.24		.02	.03			.23	T.	.07			.23		1.70
Cooperstown	Susquehanna		.10				.36	.19			.11	.03	.70		.36	.10		.04	.10		.09	.05		.21	.12		.14		.03			3.33
Corinth	Hudson	.18						.75						.52		.25			.72	.05					.30					.32		3.09
Cortland	Susquehanna	.04	.02	.02			.17	.18	.06		.05			.42		.40	.01		.76		.05	.02	.01		.31	.02	.02			T.		2.56
Cutchogue	Coast	.88					.25	1.10			.07		.25	.50		1.75			1.12		.18				1.36	T.			.82	T.		8.28
De Ruyter	Susquehanna	.01	.06				.18	.17			.11		.35			.31			.63	.01	.03	.08			.29				.05			2.28
Easton	Hudson	.56	T.				.47				.05					.40		.36							.19							2.03
Glens Falls	do		T.				.10	.57			.08	.02	.05	.48		.22			.54	T.	T.	.08			.27		T.		*	.21		2.62
Gloversville	Mohawk	.03	T.	.03			.30	.48	.20		.26	.08	.44			.20	.12		.52	.04	.18	.05			.20		.18		.15	T.	T.	3.46
Greenfield Center	Hudson	.05					.20	.37	.05		.08		.30			.30	.10		.40	.05	.10				.23		.03					2.26
Greenwich	do						.23	.39			.08		.55	.05		.35			.60		.01	.07			.25					.04		2.62
Griffin Corners	Delaware		T.	T.			.37						.48	.43	T.	.27	T.		.51		.04	T.			.31				T.			2.41
Hancock	do	.43						.62								.27			.50			.11			.05	.07				.04		2.09
Haskinville	Susquehanna	.05					.26	.21			.08		*	.50		.05	.05	.20	.05		.05				.10	.08				.18		1.86
Homer	do	T.	.06				.16	.07			.05		.51	.02	.03	.21	T.	.10	.56	T.	.05	.05		T.	.30	.04	T.		T.	.02	T.	2.23
Hoosick Falls	Hudson	.18	T.	.02				.19	.17		.01	.10		.49		.33	T.		.43	.02	T.	.11	.03		.06	.09	T.	.07		T.		2.30
Indian Lake	do	.05						.50	.30		.15		.10	.80			.80		.40						1.00				.10	.20		4.40
Jeffersonville	Delaware	.15	T.				.42	.02			.04		.70			.45	T.		.85	T.	.11	T.	T.		.21	T.	T.		T.	T.		2.95
Knowelhurst	Hudson				.10			.92			.45		.45	.05	.17		.03		.07	.05					.25				.12			2.66
Liberty	Delaware	.50					T.	.35						T.	1.60			1.00		T.	T.			T.							3.45
Little Falls	Mohawk		T.	.05			.10	.10	T.		.14		.18	.27	T.	.23				.04	.07				.07		.24					1.49
Mechanicsville	Hudson						.13	.03		T.	T.		.61		.15			.43	T.	T.	.04	T.		.03			.12		T.			1.54
Mohonk Lake	do						*	1.10			.09				.20				.12		.05											1.56
Morehouseville	Mohawk		.06	.14				.44	.74		.34		.61	.25		.87	.50		.97	.10	.07	.10			.63		.49		.15	.50	.08	7.04
Morrisville	Susquehanna	.08	.07					.05	.20			.03					.40		.80			.08			.30							2.01
Mount Hope	Coast						.35	.75					.40			.40			1.10						1.75				1.10			5.85
Newark Valley	Susquehanna		T.				.33	T.			T.	T.	.38		.10	.10		T.			T.				T.							0.91
New Berlin	do	.33	T.	T.			T.	.20	.10			.04		.52	T.	.24		T.	.48		T.	T.	.10	.23	.42	.14	T.					2.80
Newcomb	Hudson	.12						.66			.54								.70										.32			2.34
New Lisbon	Susquehanna		T.				.46	.15			.02		.60		T.	.39	T.		.54		.07				.24	.03	.03					2.53
New York City	Coast	.01	T.				1.41	.01		T.	.04		.08		.32	.48		.08	.70		T.				.86				.23			4.22
North Creek	Hudson						*	.56					.36						.45										1.10			2.47
Northville	do						.60	.30		.08	.10		.50			.22	.10	.90	.10					.50					.35			3.75
Oneonta	Susquehanna		T.				.11	.08			T.		.39	.01		.16	.05	.02	.49	T.	.05	.03			.22	T.	T.					1.61
Oxford	do	.05	T.				.19	.20	T.		.13		.40		.10	.40	T.			T.	.10	T.			.70	T.	T.	T.	T.	T.		2.27
Oyster Bay	Coast										.05			.35		1.12			1.15						.93				.18			3.78
Port Jervis	Delaware	.05	T.				.37	.15	T.	T.	.04		.45	.06		.51		*	.66		T.				.31			T.	T.	.18		2.78
Rome	Mohawk	.29	.03	.03				.04	.01	.03	.17	.16		.98		.06			.48		.67	.05			.04		.15	.19				3.38
Salisbury	do			.24			.34	.61			.41		.38	.11		.51			1.04	.08	.11				.34		.12		.12	.47		4.88
Scarsdale	Coast	T.					.60	1.30		T.			.25	.16	.10	.10		T.	2.30						T.	.75			T.	.85		6.41
Setauket	do	.15					.40	.86			.10		.40	T.	.13	1.20			1.14		T.				1.43				1.14	T.		6.95
Sherburne	Susquehanna	T.	T.					.37	T.					.45	.18			.20	T.													1.20
Southampton	Coast	1.74				.04	T.	1.51	T.		.10	.02	T.	.51		1.98			.85		T.	.05			.84	.12			.01	.88		8.65
Spier Falls	Hudson	T.					.33	.31			.02		.42			.39			.39	*	.03						T.		.12	.24		2.25
Trenton Falls	Mohawk	.92		.11				.21	.12	.06		.16		.53		.55	.15		.92	.10	.09	.15			.43	.05	.15	.14		.17		5.01
Tribes Hill	do				.20	.20		.30					.20			.40			.30								.20					1.80
Utica	do	.60		.15				.12	.15		.13			.50		.14	.15		.74	.11	.18			.30								3.27
Wading River	Coast	.25					.40	1.94			.17			.75		1.50			1.05						1.35	.25			.15	1.15		8.96
Wappingers Falls	Hudson		T.				.36	.10			.10	T.	.32	.14	.12	.18			.78	T.	.05				.42				.12			2.69
Warwick	do						.30	.26			.06		.50			.68			.93		.01				.60				.05			3.39
Waverly	Susquehanna	T.	.02				.31	.13			.01	.01	.26		T.	.05		.05	.31	T.	.07	.02			.04	T.						1.28
Wells	Hudson	.07					.14	1.04	.15		.28		.35	.05		.50				*	1.03				.33	*	.08		.11			4.13
West Berne	Mohawk	T.					.14	.23	T.		T.		.11			.20	.10		.09		T.				.08				T.			0.95
West Point	Hudson	.06						.88				T.	T.	.47		.97			.72	.48	T.				1.42	1.35				.02		5.37
Windham	Mohawk		T.	.08	T.		.10	.12			.10		.47	.07		.14	.06		.10						.28	.03	.06		T.			1.61

TABLE 2.—*Daily precipitation for November, 1911. District No. 1*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Pennsylvania.																																
Altoona	Susquehanna	T.	T.	T.			.35	.41	T.		T.		T.	.14		T.			.46	T.	T.	.05				T.			.02	T.	T.	1.43
Ansonia ||	do	.16	T.					.64				T.	.13	.28	T.				.42		T.	T.				T.				T.		1.63
Bellefonte	do						.81			.03		.04	.39		.20			.70			.02	.20		.06	.07				.07	.08		2.67
Bethlehem	Lehigh		T.				.29	.34			.04		T.	.37		.67			.35							.82				.04	.01		2.93
Brewers Lock	Schuylkill	.04					1.44						.62			.73			1.04							1.03				.35			5.25
Catawissa	Susquehanna						.25				.08		.60		.20			.20	.45		T.					.30				.12			2.20
Center Hall	do						.42	T.		.02		.01	.33		T.				.20		T.	T.				T.				.65			1.63
Coatesville	Coast	T.					.89				.05		.50		.07	.69			.91							.96	T.			.28	.01		4.36
Doylestown	Schuylkill						.15						.51			.21			1.30							1.00				.40			3.57
Drifton	Susquehanna	.08	T.				.45	.35			.10		1.50		.30	.35			.80		.03	T.				.45	T.		.15				4.56
Emporium	do		T.				.75	T.		T.	.10		.35		.05			.32	.44		T.					.40			.18	.07			2.66
Ephrata	do	.02					.80			T.	.03		.35			.44			.69							.82				.06	.16		3.37
Everett	Juniata	T.	T.				.76			T.	.07		.21			T.			.45		T.	T.				T.				.21			1.76
Forks of Neshaminy	Delaware						.59	.77			.04		.61		.66				1.25							1.20				.53	.02		5.67
George School		.05					.32	1.33			.04	.02	.12	.20	.76	.02	.02		1.10	.01						.94				.75	T.		5.68
Gettysburg	Potomac	T.	T.				.80	.26		.03	.05		.50			.22			.43		T.	T.				.30				.18			2.77
Girardville	Susquehanna						.93				T.		.91		.52			.20	.62		.07	T.				.56	T.			.30			4.11
Gordon	do	.19					.47	.42			.02			.96		.51			.78			.08				.58				.38	.15		4.54
Hamburg	Schuylkill						.55						.84		.75		.20	2.05					.65							.38			5.42
Hanover	Susquehanna	.05				.01	.95				.10		.53		.33				.45			T.			.47					.11			3.00
Harrisburg	do						.79			T.	.02		.40		.30	.06		.12	.38		T.	T.		T.	.24	T.				.07			2.38
Huntingdon	Juniata						.60	.06		T.			.30			.13			.60		.02	.10			.05					.10			1.96
Hyndman	Potomac				T.		.98			T.	T.		.14			.20	T.	T.	.35		.08	T.		T.	T.	T.				.07			1.82
Kennett Square	Coast						1.25				T.	.08	.49		.72				.70	.47					1.01				.62			5.34
Lancaster	Susquehanna	.11				.03	.32	.45			.09		.39		.43				.68							.58	T.			.07			3.15
Lansdale	Schuylkill						.57	.09					.36			.73									1.52				.27			4.14
Lebanon	Susquehanna		T.				.79			T.		.05	.50			.40			.80		T.					.46				.23			3.23
Le Roy	do		.06				.39	.15			.01	.02	.40		.01		.01	.01	.30	.01	.02	.08			.05	.01				.02			1.55
Lewisburg	do						.51	.05			.06	.07	.36		*	.18		.45							.23	.05				.12			2.08
Lloyd	do					.60					.70	T.	.50						.40		.20	T.			T.						.30		2.70
Lock Haven	do						.48				.06	T.	.34			.08		T.	.68			.15											1.79
Marion	Potomac		T.				1.02	.32		.05	.08		.34			.15			.50			T.			.28				.22				2.46
Mauch Chunk	Lehigh						.53	.30			.05		.60		T.	.80			.82			.05			.35				.52				4.08
Mifflintown	Juniata	.05					.67	.01		T.	.05		.48		.05	.07			.28			T.			.18				.03				1.87
Milford	Delaware	.08	T.				T.	.75			.04		.40			.06			.13		.01				.25	T.			.20	.26			2.18
Montrose	Susquehanna	T.	T.				.55			T.	T.		.50			.10			.55		.05	.05	T.		.05								1.85
Mountain House	Juniata						.70	.08			.05		.30						.43						.13				.10				1.79
Mount Gretna	Susquehanna		T.				.78			T.	.05		.39		.03	.30			.80		T.				.34	T.			.23				2.98
New Germantown	do						.80				.14					.50			.55								.21						2.20
Ottsville	Delaware	.05					.45	.57					.40			.69			1.36						.85				.18				4.55
Philadelphia (1)	do	.01			T.	.02	1.31			T.	.04		.41		.52	.26		.05	1.07						.98				.91				5.58
Pocono Lake	do	.11					.43				.34		.40			.40									.20				.60				2.48
Point Pleasant	do						.51	.57					.38			.66			1.44						.83				.22				4.61
Pottsville	Schuylkill						.67				.08		.85		.34	.41			.81		.05				.38				.38				4.06
Reading	do	T.					.74			.01	.03		.39		.33	.20		.02	.78		T.	T.			.76				.23				3.58
Renovo ||	Susquehanna							.58				.04		.38		.01			.06			.15			.12					.05			1.39
Scranton	do		T.				.24			T.	T.	.01	.52		.54	.10	T.	T.	.24	T.	.01	T.	T.		.20	T.			T.	T.			1.86
Seisholtsville	Schuylkill						.85						.56			.65			.97						.86				.33				4.22
Selinsgrove	Susquehanna	.06	T.				.57	.29			.06				.20		.49	T.				.02			.27	.01			.14				2.11
Shawmont	Schuylkill					.03	1.00	.10					.45			.70			1.00						1.00				.90				5.18
Smiths Corners	Susquehanna						.71	.49					.45			.63			1.37						.84				.23				4.72
Spring Mount	do	.01					.64	.26			.05		.36		.68				1.06						.81				.18	.02			4.07
State College	do	T.	T.				.69			.02	.02	T.	.40	.01	.04	.03	T.		.75	T.	.01	.04			.07	T.			.20	T.			2.28
Stroudsburg	Delaware	.15	T.				.37	.39		.01	.04		.33	.26		.73			.84		T.				.35				.05	.20			3.72
Towanda	Susquehanna		T.				.23	.04	.02		T.		.26		T.	T.	T.	T.	.20	T.	T.	.12			.11	.01				T.			.99
Weikert	do						1.18				.10		.40		.03			.58							.06					.02			2.37
Wellsboro	do						.53						.28			.32		T.	.42			.06			.21					.10			1.92
West Chester	Coast	.01				.01	1.12	.03		.01	.05		.47		.03	.68			.85						1.03					.54	.01		4.84
Wilkes-Barre ||	Susquehanna			T.				.43						.46		.32			.70			T.			.11	.10					T.		2.12
Williamsport ||	do	.14	T.					.65			T.		.05	.35		.04			.51			.02				.04				.02	T.		1.82
New Jersey.																																
Asbury Park	Coast	.12					.21	.54			.08		.39			.79			1.01		T.				1.13				1.30				5.57
Atlantic City	do	.84			.01	.24	.60	.01		.22	T.		.47		.04	.61			1.12		.03	T.			1.29				.38				5.86
Bayonne	do	T.					.58	1.04			.04	T.	.13			.80			1.18						1.05				.47				5.29
Belvidere	Delaware						1.60				.04		.44			.72			1.12		.05				.79					.27			5.03
Bergen Point	Coast	.03					.60	1.03		T.	.03		.22		T.	.82			1.06						1.03				.57				5.39
Boonton	Passaic							1.40	.02			.06	.03	.20		.93			1.04	.21					.47	.32				.24			4.92
Bridgeton	Coast					.08	.80			.08			.50			.82			1.02						1.10				.78				5.18
Burlington	Delaware						1.40				.02		.47			.75			1.83						.93				1.01				6.41
Canton	Coast						.85			.10			.44			.88			.87						1.03				.90				5.07
Cape May City	do	.10			.12	.20	.57	.17		.45	.05		.86		.17	.55		.10	.65		.06				1.61				.27				5.93
Chatham	Passaic	T.						1.45			T.	.05		.25		.60			1.10	.35					.40	.45				.45			5.10
College Farm	Coast						.33			T.	.07		.35			.80			1.12						1.15				.78				4.60
Culvers Lake	Delaware	.14	T.				.82			T.	.01		.50			.72			.90		T.	T.	T.		.40	T.				.14			3.63
Dover	Passaic						1.15						.39		*	1.00			1.32						.88					.17			4.91
Elizabeth	Coast						*	1.50	T.		T.		.17		*	.82			1.18						1.12					.42			5.21
Flemington	do						1.29			T.	.06		.34			.71			1.37						.82					.25			4.84
Haddonfield	Delaware	.02				.04	.98			.01	.11		.51			.74			1.16						1.21				1.58				6.36
Hammonton	Coast	.05				.08		.85		T.	.08		.48			.82			1.12						1.03				1.20				5.71
Hightstown	Delaware						.83	.50			T.	T.	.15		.46	.35			1.00						1.16				.96				5.41
Highwood	Coast	.04					1.42			T.	.05		.23			1.04			1.42		T.				.97				.23				5.40
Indian Mills	do	.04					.97			T.	.09		.35			.76			1.04			.01			1.12				1.20				5.58
Jersey City	do	T.	T.				*	1.48		T.	.04		.15		*	.87			1.20		T.				1.04				.45	T.			5.23
Lakewood	do	.03				.02	.40	.53		T.	.13		.49		T.	.72			.83						1.04				1.27				5.46
Lambertville	Delaware						1.46			T.	.07		.45			.69			1.31						1.19				.40				5.57
Little Falls	Passaic	T.					1.35	T.			.02		.22		.47	.43		.09	1.36						.79				.22				4.95
Long Branch	Coast	T.					.31	.70			.04		.43			.92			.98		T.				1.18				1.33				5.89
Mahwah	Passaic							1.10						.50		.90			1.10	.15					.50	.30							4.55
Moorestown	Delaware	.01				.04	1.19			T.	.04		.47		T.	.74			.99						1.10				1.28				5.86
Newark	Passaic		T.				2.12	.60		T.	T.	T.	.21		.50	.25	T.	.47	.90		T.				.86				.43				6.34
New Brunswick	Coast						1.25				.05		.30			.70			1.05						1.12				.60				5.07
Newton	Delaware		T.				.57			T.	.06		T.			.76			1.05						.56					.17			3.17
Northfield	Coast	.23				.24	.20	.50		.19	.05		.44			.71			1.18			.03			1.23				.61				5.61
Paterson	Passaic	.06	T.				1.36				T.		.21			.98			1.45		T.				.71	T.			.20				4.97
Phillipsburg	Delaware	.02					.73				.02		.38		.47	.38		T.	1.14		T.				.91				.20				4.25
Plainfield	Coast						.39			T.	.03		.28		T.	.75		.03	1.35						1.01				.45				4.29
Pleasantville	do	.23				.23	.36	.50		.16	.04		.35		.01	.76			1.21		T.				1.36				.70				5.91
Pompton Plains	Passaic	.04						1.32						.27		.85			1.10	.14					.49	.29				.19			4.69
Somerville	Coast	.03					.31	.96		T.	.05		.32			.73	T.		1.27						1.00				.33				5.00
South Orange	do		T.				1.13	.44		T.	T.		.10		.10	.70			1.32		T.				.95				.35				5.00

TABLE 2.—*Daily precipitation for November, 1911. District No. 1*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
New Jersey—Contd.																															
Sussex	Hudson	.13					.60				.02		.65			.71			.95						.45					.11		3.71
Tuckerton	Coast	.22				.18	.22	1.13		.04	.07		.63			.78			1.32						1.23				.68			6.50
Woodbine	do					T.	.17	.78		.22			.34			.83			1.03						1.24				.55			5.16
West Virginia.																															
Bayard	Potomac	.07			T.		.94		T.				.26	.05			.23		.58		.08	.20			.10	.05			.10	.10		2.76
Burlington	do		T.				1.00			T.					.45	T.			T.			T.										1.45
Harpers Ferry ‖	do						T.	.90		T.	T.			.27		.35			.22							.19						1.93
Lost City	do				T.		.90			T.			.40		.16							T.			.35				.14			1.95
Martinsburg	do						1.05			T.			.30		.20				.22						.28				.15			2.20
Moorefield	do		T.	T.			.79			T.	T.					T.			.27			T.			.21							1.27
Romney ‖	do	T.	T.				.15	.90			T.			.25		T.	.27		.35				T.		.27	T.			T.			2.19
Upper Tract	do				T.		1.08			T.			T.				.15		.18			T.			.10	T.				T.		1.51
Maryland.																															
Annapolis	Coast						.37	.47		.16			.08	.06											.79				.68			2.61
Baltimore	do	.01	T.		.04	T.	1.35			.02	.04		.40		.30	.25		T.	.58		T.	T.		T.	.60				.69			4.28
Cambridge	do				.21		.33	.57		.43			.31			.94			.68			T.			1.40	T.			.68			5.55
Cheltenham	do		T.				.65	.40		.17	.05		.10			.67			.52						.80	.75			.75			4.86
Chestertown	do						.46	.35		.05	.12		.20	.26		.78			.75			T.			1.06				1.20			5.23
Chewsville	Potomac		T.			T.	.89			.02			.50	T.		.21	T.	T.	.16		T.	T.			.33				.14			2.25
Clear Spring	do			T.				1.32			.06			.45		.02	T.		.33			.03	T.			.30			.10	.02		2.63
Coleman	do	.04					.95			.05	.10		.46		.66				.75			T.			1.23				1.26	.01		5.51
College Park	do	T.	T.				.58	.62		.05	.03			.30		.57			.98						.80				.66			4.59
Cumberland	do						.23	.90				.05		.10			.05	.35				.04		.05					.10			1.87
Darlington	Coast	T.			T.		.38	.59		T.	.09		.64	.05		.64			.73		T.	T.			.93				.50	.05		4.60
Denton	do						.44	.48		.23	.13		.30			.65			.68						1.15	.03			.61			4.70
Easton	do					.08	.39	.41		.25	.06	.07	.30			.65			.65						1.08				.53			4.47
Emmitsburg	Potomac	T.					1.16			.10					T.				1.00					.20	.20				1.05			3.71
Fallston	Coast	.02				T.	.44	.69		T.	.11		.56			.63			.80		T.	T.			.79	.01			.50	T.		4.55
Frederick	Potomac	T.	T.			.04	1.00	.12		.02	.05	.02	.34		T.	.50	T.	T.	.49		T.	T.			.27	T.			.26			3.11
Frostburg	do	.01	T.				1.39			.03			.13	T.		T.	.20		.45	.02		.10			.06				.10	T.		2.49
Great Falls	do																														
Green Spring Furnace.	do		T.				1.08				.06		.33			.13	.10		.35			.03			.28				.12			2.48
Keedysville	do	.05	T.				.82	.23		T.	.04		.35			.24			.18			T.			.17				.15			2.22
Lake Montebello	Coast					.05	1.38	T.		.01	.03	T.	.42		T.	.50			.63		T.	T.			.66				.74			4.44
La Plata	do																														
Laurel	do					.07	1.00	.05	.30				.43			.55			.58						.76				.51			4.55
Leonardtown	do	.01					.27	.57		.52			.28			.61			.54						1.71	T.			.25	.02		4.78
Monrovia	Potomac	.04	T.			.08	.50	.52		T.	.06		.58			.50			.60						.32				.20	.04		3.44
Pocomoke City	Coast	.11				.50	.15	.17		.95	.01		.90			.40			.45						1.14	.02			.41	.09		5.30
Porto Bello	do						1.00			1.60			.50		.40			1.10						1.80	T.						6.40
Princess Anne	do	.14			.09		.58			.81			.82			.45			.35			.22			1.43				.48			5.37
Rockville	Potomac	.01					1.12	.22		.01			.61	.01		.50			.53			T.			.48	T.			.32			3.81
Salisbury	Coast	.21				.24	.48	.70		.53	.55		.02	1.17		.56			.97			1.15			1.94	.01			.32			8.85
Solomons	do	.02	T.		T.	.12	.44			.57	.01		.13		.01	.37			.43		T.	T.			.92	T.			.10			3.12
State Sanatorium	Potomac		T.			T.	.82	.14		.04	.05		.67	T.	T.	.15	T.		.20		T.	T.			.35	T.			.25	T.		2.67
Sudlersville	Coast	.06					.44	.43		.10	.14		.45	.11		.72			.83			T.			1.21				1.03	.15		5.67
Takoma Park	do	.01	T.			.04	T.	1.05		.05	.06			.48		.55			.45	.06					.40	.30				.65		4.10
Taneytown	do						.69			.50			.63						.89						.50				.22			3.43
Towson	do		T.				.85	.39		T.	.08		.57			.56			.63		T.	T.			.66	T.			.44	.02		4.20
Van Bibber	do						1.50			.03															2.00				1.05			4.58
Westernport	Potomac						1.35			.04				.02					.62													2.03
Westminster	Coast	.08		T.		T.		.94			.10		.45	.52								T.			.28	.20			.17	.10		2.84
Woodstock	do	.18			T.	.12	.48	.72		T.	.60	.01	.42	.02		.54	.24		.63	T.	T.	T.			.58	T.	.02	.03	.44	.90		5.93
Delaware.																															
Delaware City	Coast					T.	.34	.38	T.	T.	T.		.28	T.		.77			.43						1.12	.02			1.16	T.		4.50
Dover	do	T.					.55			.50	T.		.40			.50			1.00						1.21				1.04			5.20
Milford	do					.20	.23	.87		.39	.09			.37		.76			.70			.03			1.52	.03			.54	.04		5.77
Millsboro	do	.50	T.			.28	.25	.42		.51			.66		.02	.55			.53			.11			1.80				.53			6.16
Seaford	do	.04	.01			.24	.29	.50		.45	T.			.54		.56			.57			.05			1.30	.03			.33			4.91
District of Columbia.																															
Washington	Coast	T.			T.	T.	.95			.10	.01		.46		.35	.21		T.	.52		T.			T.	.64				.61			3.85
Virginia.																															
Culpeper	Rappahannock						1.14			.14	.03		.27		.38			.41							.32				.50			3.19
Dale Enterprise	Shenandoah	.01	T.			T.	1.50	.05		.13			.34		.30	.03			.18			T.			.10				.15			2.79
Doswell	Pamunkey																														
Eastville	Coast	.30			T.	.61	.06	.86		1.10	.10			.17		.28			.15			.08			.60				.60			4.91
Fredericksburg	Rappahannock						.49	.65		.40	.02		.42			.38			.39						.56				.81			4.12
Lincoln	Potomac		.08				1.48	.05		.09	.03		.50						.30						.21				.15			2.89
Mount Weather	do	.04	T.		.04		.97			.07	.02		.59		.32	T.		T.	.16			T.			.16	T.			.06			2.43
Onancock	Coast	.20				.83	.11			.85	.02			.38		.40			.41		.23				.82	.40			.45	.14		5.24
Quantico	Potomac						.38			.11			.07					1.14							.27				.23			2.20
Staunton	Shenandoah		T.				1.32		.11	.02			.30		.20	.02			.49			T.			.11				.16			2.73
Warsaw	Rappahannock																														
Woodstock	Shenandoah			T.	T.		.95			.07	.01		.39			.27			.14			T.			.18				.07			2.08

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for November, 1911. District No. 1, North Atlantic States.*

Date.	Maine.												Concord, N. H.		Massachusetts.								Providence, R. I.		Connecticut.			
	Eastport.		Greenville.		Orono.		Portland.		Presque Isle.		Rumford Falls.				Amherst.		Boston.		Middleboro.		Nantucket.				Cream Hill.		Hartford.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	50	32	43	26	50	33	49	25	.....	.....	44	36	48	35	52	35	59	39	58	45	56	46	56	39	50	36	58	38
2	32	22	29	19	37	23	39	25	.....	.....	37	24	41	23	43	27	46	29	47	31	48	30	46	27	44	24	45	30
3	33	21	32	18	48	19	42	24	.....	.....	36	23	43	22	44	26	47	28	46	19	45	30	45	26	42	22	44	27
4	47	31	44	22	48	20	48	29	.....	.....	44	25	48	23	51	25	52	34	51	26	53	37	52	33	45	25	49	32
5	48	35	43	21	49	21	50	34	.....	.....	48	24	53	25	55	28	50	37	57	29	51	43	54	34	54	24	54	32
6	46	38	44	20	48	19	50	32	.....	.....	45	22	49	24	49	26	53	37	54	24	54	45	54	33	46	34	54	32
7	55	45	52	33	59	36	64	47	.....	.....	56	40	62	47	62	39	65	48	63	46	59	51	63	49	57	37	63	43
8	43	41	40	35	59	39	50	39	.....	.....	44	40	48	39	50	36	52	42	59	43	53	45	51	41	47	33	51	43
9	42	36	36	32	48	36	45	34	.....	.....	44	32	45	29	52	26	49	38	51	24	51	43	50	34	44	27	48	33
10	44	40	35	31	48	33	43	39	.....	.....	39	32	43	39	44	40	49	45	49	36	49	47	49	44	48	29	48	42
11	56	42	54	35	55	36	57	36	.....	.....	58	36	65	33	62	36	64	44	66	32	61	46	61	41	62	34	64	36
12	57	48	58	39	60	38	60	43	.....	.....	62	36	67	36	66	32	68	40	67	50	63	52	67	37	60	34	67	32
13	58	26	58	21	63	26	43	25	.....	.....	34	26	36	24	32	25	40	27	64	28	52	30	37	25	34	18	33	27
14	31	24	30	20	42	21	34	22	.....	.....	34	25	35	21	35	20	39	25	38	18	45	29	39	23	38	18	38	23
15	52	27	30	22	38	26	43	32	.....	.....	38	27	41	28	40	31	49	37	55	32	56	40	54	34	34	26	43	31
16	35	25	29	21	36	28	36	23	.....	.....	34	22	36	22	38	21	42	28	43	31	44	31	41	24	30	22	38	25
17	32	20	26	12	35	18	39	19	.....	.....	29	17	34	19	40	20	43	25	43	19	46	28	42	22	32	14	41	24
18	51	25	36	17	40	22	47	29	.....	.....	38	28	43	31	44	30	57	37	58	33	59	42	58	37	44	32	50	33
19	41	31	35	25	41	7	41	32	.....	.....	38	34	40	33	42	35	45	38	45	36	47	39	44	34	32	26	42	37
20	39	28	33	23	40	25	44	29	.....	.....	39	28	42	25	40	29	47	34	45	30	48	37	45	32	33	27	43	31
21	39	29	32	17	41	26	38	30	.....	.....	38	22	39	29	39	29	42	32	39	30	43	34	41	30	34	23	40	30
22	32	21	24	18	40	22	34	25	.....	.....	30	24	32	25	36	22	36	28	38	25	36	29	35	25	30	16	34	25
23	41	18	34	17	37	14	41	21	.....	.....	36	21	42	21	42	18	45	26	43	17	49	28	46	24	34	17	45	23
24	46	36	33	27	41	30	41	35	.....	.....	36	32	42	36	42	36	54	37	53	33	53	40	54	36	40	24	47	37
25	36	18	33	13	38	23	36	24	.....	.....	34	19	37	23	36	26	38	28	45	29	40	30	37	27	33	22	37	25
26	37	17	23	8	34	15	36	24	.....	.....	30	16	39	22	42	24	44	29	45	20	45	32	45	28	36	20	43	29
27	36	26	29	20	35	22	46	30	.....	.....	41	24	48	25	50	32	50	36	49	23	49	36	51	33	42	27	52	35
28	52	30	36	22	45	24	51	35	.....	.....	35	23	56	25	56	32	60	40	55	26	55	41	58	37	50	31	58	35
29	53	24	45	20	53	35	52	28	.....	.....	42	16	52	26	54	26	60	32	57	40	55	34	59	29	52	30	58	31
30	32	22	26	12	50	18	38	24	.....	.....	34	16	36	19	39	21	41	27	40	17	40	31	40	25	32	18	39	24
Mns.	43.4	29.3	36.7	22.2	45.3	25.2	44.6	30.1	.....	.....	39.9	26.3	44.7	27.6	45.9	28.4	49.5	34.2	50.8	29.7	50.2	37.5	49.1	32.1	42.0	25.7	47.5	31.5

Date.	New Haven, Conn.		New York.												Pennsylvania.												Atlantic City, N. J.	
			Addison.		Albany.		Binghamton.		Indian Lake.		Little Falls.		New York.		Everett.		Harrisburg.		Philadelphia.		Scranton.		State College.		Wellsboro.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	58	38	55	37	54	34	48	30	46	30	49	32	59	39	60	43	58	41	62	43	49	32	53	40	55	33	62	40
2	46	30	39	28	41	30	36	27	32	19	33	24	47	32	48	31	44	33	48	34	40	29	43	30	39	29	47	31
3	46	28	48	25	42	30	43	28	37	20	37	24	47	30	45	28	46	33	46	32	44	28	41	28	46	27	48	29
4	48	32	53	24	41	29	50	26	47	21	40	25	47	34	52	24	46	32	49	37	50	28	50	36	53	22	52	36
5	55	37	55	32	49	30	50	31	43	16	47	27	54	41	54	36	54	40	56	44	53	33	51	38	56	31	54	43
6	54	35	47	27	46	27	53	30	41	15	41	27	56	44	45	40	51	39	55	42	55	39	48	37	46	27	60	42
7	64	50	56	44	62	43	55	43	49	32	54	38	61	47	60	42	62	45	67	47	58	45	55	44	55	41	66	47
8	52	42	45	36	47	40	43	38	40	34	42	35	52	42	47	38	49	44	54	42	46	37	45	39	45	34	54	43
9	50	37	50	24	50	32	47	29	43	27	42	32	50	42	44	37	47	40	52	43	51	30	44	30	45	31	54	45
10	51	42	56	44	47	41	53	39	40	26	50	36	50	45	63	37	53	41	55	45	54	41	60	39	58	39	58	50
11	58	37	69	33	62	40	66	38	47	26	64	38	60	41	70	33	66	39	67	43	66	43	64	34	68	31	61	49
12	66	37	62	32	65	30	62	23	60	46	64	28	68	32	65	14	66	24	71	28	64	25	60	21	60	30	64	31
13	37	27	32	17	31	36	25	19	50	16	30	18	34	24	25	15	29	21	35	26	28	21	24	13	32	15	33	25
14	40	24	32	21	34	25	32	22	28	16	36	18	37	25	30	16	34	23	37	27	34	22	29	16	29	18	55	24
15	44	34	44	24	42	30	40	28	31	20	34	24	44	31	50	27	48	28	47	32	44	28	42	25	42	22	55	36
16	42	27	37	25	38	24	33	24	30	16	35	20	41	26	45	27	41	32	45	33	37	25	36	26	38	29	43	29
17	41	24	34	19	36	20	36	21	29	2	27	6	43	26	40	20	40	29	44	30	42	23	36	20	34	17	56	26
18	56	33	42	31	46	34	44	33	38	10	37	20	56	39	50	35	46	37	59	39	43	37	42	34	41	30	60	45
19	44	36	37	30	41	34	36	32	32	22	35	28	42	34	52	30	42	32	47	36	40	34	38	29	36	28	49	32
20	44	32	39	29	40	32	39	30	34	22	35	26	48	31	55	23	46	32	52	33	43	31	44	26	38	26	54	32
21	42	31	36	27	35	28	34	26	30	21	32	22	43	30	41	30	40	32	45	34	37	28	35	25	37	25	48	32
22	37	26	40	23	35	25	29	21	27	15	27	18	37	28	41	27	41	29	41	31	31	23	38	21	37	20	40	26
23	47	24	42	19	42	22	43	21	39	1	35	16	48	28	50	20	46	26	49	30	46	22	44	26	43	18	52	28
24	52	37	41	34	42	35	40	27	34	26	37	31	49	37	44	32	43	35	51	40	43	33	42	31	39	32	55	38
25	39	28	34	21	35	23	30	21	30	9	33	15	39	29	34	25	36	32	41	33	34	24	32	25	35	22	38	32
26	45	31	42	28	38	30	37	30	33	15	35	21	44	32	52	22	49	30	49	32	39	31	41	26	36	27	49	33
27	50	35	56	24	48	32	51	28	40	26	38	25	50	34	56	23	49	32	53	37	54	30	53	27	54	22	50	35
28	57	38	53	35	54	40	56	40	39	21	47	32	58	47	52	29	54	38	58	43	59	38	50	41	50	34	59	49
29	58	31	50	30	53	28	45	24	44	19	48	25	54	33	49	28	47	31	55	34	50	28	48	27	51	29	53	31
30	41	25	41	21	39	27	38	25	28	15	31	24	38	29	40	21	40	25	41	30	37	24	35	22	32	21	40	28
Mns.	48.8	32.9	45.6	28.1	44.5	30.7	43.1	28.4	38.4	20.1	39.8	25.2	48.5	34.4	48.7	28.5	47.1	32.2	51.0	36.0	45.7	30.4	44.1	28.9	44.2	26.8	52.3	35.6

TABLE 3.—*Maximum and minimum temperatures for November, 1911. District No. 1*—Continued.

Date.	New Jersey.								Martinsburg, W. Va.§§		Maryland.								Millsboro, Del.		Washington, D. C.		Virginia.					
	Bridgeton.		Hightstown.		Phillipsburg.		Sussex.				Baltimore.		Darlington.		Frederick.		Westernport.						Fredericksburg.		Staunton.§§		Woodstock.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	63	50	61	47	55	35	59	41	57	49	59	46	59	46	59	48	63	48	63	46	60	42	61	54	63	50	59	50
2....	52	32	47	30	43	31	44	29	42	39	48	35	49	35	48	37	50	33	50	33	47	32	55	38	44	40	53	33
3....	49	26	50	24	45	28	47	26	46	27	48	32	45	26	47	28	49	24	50	25	45	30	48	26	47	20	52	22
4....	52	26	48	26	46	26	47	25	51	29	50	36	47	28	49	28	51	27	50	25	48	31	50	26	49	24	50	29
5....	60	39	55	37	54	32	50	31	56	35	55	42	58	28	55	39	58	42	57	33	60	40	58	42	61	36	59	39
6....	57	35	56	31	52	31	50	29	53	41	55	42	53	36	51	36	47	41	62	34	56	39	58	38	56	41	51	39
7....	70	48	66	49	62	46	62	48	60	41	68	48	66	45	64	44	62	45	67	49	68	47	68	47	66	42	67	39
8....	56	40	54	38	50	39	54	41	63	38	52	43	55	35	51	37	50	37	57	38	51	45	61	35	52	36	55	35
9....	52	40	52	37	49	37	49	30	46	40	49	44	48	40	46	42	46	40	52	43	48	43	50	42	46	39	46	38
10....	57	46	53	43	48	41	47	40	67	42	63	46	58	43	58	43	65	42	62	47	63	46	64	45	68	40	71	40
11....	68	37	69	40	66	40	70	38	69	41	68	46	64	36	67	39	73	37	69	36	68	41	71	40	72	41	74	36
12....	70	50	73	51	67	27	66	41	66	41	71	27	66	48	66	34	64	34	71	41	70	28	73	53	70	50	71	38
13....	50	24	67	23	32	21	43	21	30	18	32	22	59	20	34	20	41	15	42	25	31	22	55	21	34	16	38	16
14....	40	23	37	21	34	22	33	20	41	18	39	26	34	20	37	22	32	19	41	22	38	26	38	25	45	24	38	20
15....	50	32	44	31	43	27	42	26	55	25	53	34	50	35	54	31	52	31	56	36	54	34	59	34	56	34	58	28
16....	46	32	41	33	38	25	37	22	42	34	45	34	44	33	47	34	49	31	47	31	47	32	50	36	53	35	48	31
17....	48	24	43	22	39	23	37	22	54	24	45	31	41	22	44	24	39	23	52	24	47	26	47	24	54	25	42	22
18....	60	39	59	36	43	33	44	31	53	26	54	41	52	37	49	40	53	38	64	37	55	43	62	43	52	42	52	41
19....	50	35	45	33	42	32	43	34	43	38	49	37	47	34	47	36	45	35	55	32	51	31	55	34	48	36	51	35
20....	55	25	53	25	49	28	39	25	55	28	54	33	51	27	52	26	47	25	60	25	54	31	61	26	58	28	57	23
21....	49	32	46	31	40	29	40	30	42	30	45	36	48	31	50	34	44	33	48	33	45	34	54	30	42	33	57	23
22....	45	25	39	26	38	25	34	25	43	29	44	32	39	26	43	28	44	26	45	25	44	29	46	29	44	20	47	23
23....	55	22	51	19	48	20	45	18	50	23	52	32	46	23	49	23	47	25	56	20	51	29	54	24	49	28	50	23
24....	50	40	50	39	42	37	41	36	44	23	49	38	40	33	45	37	45	34	59	36	47	37	50	38	48	42	45	33
25....	40	30	39	29	38	26	38	26	38	29	39	34	41	29	41	30	34	26	40	29	40	29	44	28	41	24	45	26
26....	49	27	46	27	45	31	42	27	55	27	51	32	50	25	50	24	52	28	55	29	50	29	57	31	53	28	59	28
27....	59	27	53	25	52	29	51	33	53	27	51	34	49	27	50	26	53	25	59	29	53	31	54	28	56	27	53	27
28....	57	39	59	31	56	35	56	31	52	27	55	42	56	37	49	34	51	36	65	38	56	38	52	37	51	36	48	35
29....	57	36	54	37	50	31	56	33	36	35	52	34	56	34	40	33	52	29	65	35	52	33	50	36	37	32	49	31
30....	42	27	41	22	37	25	38	20	43	23	42	29	39	23	41	26	38	25	41	36	43	28	45	25	39	28	45	20
Mns.	53.6	33.6	51.7	32.1	46.8	30.4	46.8	30.0	50.2	31.6	51.2	36.3	50.3	32.1	49.4	32.8	49.9	31.8	55.3	33.1	51.4	34.2	58.3	34.5	51.8	33.2	53.0	30.8

a, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1911.

DISTRICT No. 2, SOUTH ATLANTIC AND EAST GULF STATES.

CHARLES F. VON HERRMANN, District Editor.

GENERAL SUMMARY.

November, 1911, was a cold, windy, disagreeable month, marked in all portions of the district by rapid fluctuations of temperature, general frosts, and much cloudiness and rain, except along the immediate coast from Savannah to Hatteras, where drier weather prevailed. The month was ushered in by cold weather and the first killing frost of the season occurred on the 3d over the greater portion of the district. After a week of warmer weather, with the highest temperatures for the month on the 6th and 12th, three pronounced cold waves spread over the district in rapid succession, on the 12th to 13th, 24th to 25th, and 28th to 30th, during which the temperature dropped from 30° to 50° in less than 24 hours at many stations. It is interesting to note the extent of the wave-front that brought the sudden fall in temperature on the 12–13th. At Montgomery, Ala., the temperature was 72° at 6.50 a. m. on the 12th, and fell rapidly to a minimum of 27° on the morning of the 13th. At Richmond, Va., the fall in temperature began at 3.30 p. m. on the 12th, when the maximum temperature was 72°, and within 16 hours the minimum reached 26°. The four periods of cold weather during November caused marked deficiencies in monthly mean temperatures in every State in the district except Florida, where there was a moderate excess. At a number of individual stations the current means are the lowest for November during the past two or three decades.

The precipitation was uniformly above the normal in all portions of the district, the excess averaging nearly 1.40 inches. The heaviest rains fell in Florida, where the State average, 4.16 inches, is noteworthy as the greatest November average since the establishment of the climatological section in 1891, November in that State being normally one of the driest months of the year. The rainfall was evenly distributed throughout the month in four fairly well defined periods, and no station received less than 1 inch, and at only one place, Homestead, Fla., did the total amount exceed 10 inches. The amount of snowfall was quite small; inappreciable flurries occurred at a few places in the mountainous portions of Virginia and North Carolina and in the extreme northern portions of the Gulf States. Sleet was recorded on one or two dates.

The changes in atmospheric pressure during the month were rapid and unusual for November, partaking more of the characteristics of a winter than a fall month. Although the district came remotely under the influence of about 11 areas of low atmospheric pressure, the several high-pressure areas seemed to have more force, and it is worthy of note that the areas of high pressure spread over the district without any forerunning lows. From Augusta northward the highest atmospheric pressure occurred on the 3d, with a maximum of 30.71 inches at Lynchburg, Va., but near the Gulf coast the barometer was highest on the 30th. The lowest pressure occurred on the 18th, during the passage of a severe storm north of the Lakes, the minimum being 29.44 inches at Norfolk, Va.

The amount of sunshine for November was very deficient, an almost uninterrupted period of cloudy weather prevailed from the 1st to 12th. In consequence of cloudy weather, frequent rains, and uncomfortable temperature conditions the month was not favorable for farm work.

TEMPERATURE.

The temperature over the greater portion of the district was decidedly below the normal, the State deficiencies ranging from about 2° for Virginia to nearly 4° for the Mississippi area. Near the Atlantic and Gulf coasts the deficiencies were generally under 2°, and approached normal at many stations, but it increased to over 4° in the northern portions of the Gulf States and in the mountainous districts of Virginia and the Carolinas. Conditions, however, were reversed over the Peninsula of Florida, where the temperature was considerably above the normal. The mean temperature for the entire district was 52.3° and the departure averaged −2.3°. The highest State mean was 65.7° for Florida and the lowest, 45.6°, for the Virginia area, while the monthly means at individual stations ranged from 77° at Key West, Fla., to 37.4° at Hot Springs, Va. Over most of the section, except in Florida, where they were higher, the monthly mean temperatures were between 45° and 55°, and at several places they were lower than any previous November mean on record.

The first day of November was quite warm in some portions of the district, with the highest temperatures for the month at a number of places in Georgia and the Carolinas, but a rapid decline followed and temperatures below freezing were general on the 3d, except in Atlantic coast districts and in the southern portions of the Gulf States. A large number of stations reported the first killing frost of the season on this date. A period of warm weather of a week's duration followed, during which the highest temperatures for the month were generally recorded, namely, on the 6th in Alabama and Mississippi, on the 9th in Florida, and on the 12th in the remaining portions of the district. Maximum temperatures of 90° or above occurred at 17 stations in Florida, highest 93° at Orange City, while in other States the maximum ranged from 75° to 89°.

During the remainder of the month the weather was decidedly cold and changeable. The sudden fall in temperature during the cold wave of the 12th–13th, reaching 50° in less than 24 hours at a few stations is remarkable for an autumn month. Similar decided

changes in temperature also occurred from the 23d to 24th, and 28th to 30th. Most places that escaped frost on the 3d experienced the first killing frosts on the 13th, 25th, or 30th. Generally the lowest temperatures for the month prevailed on the 30th, except in Virginia, and ranged from 20° at Molino, Fla., to 13° at Hamilton, Ala., but the minimum for the district was 9° on the 13th at Hot Springs, Va. At Mobile, Ala., the minimum, 25° on the 30th, was the lowest November temperature in 33 years, and at some other points the minimum this month was within 2° or 3° of the previous lowest record.

PRECIPITATION.

The precipitation for November was well distributed throughout the month, and was generally above normal in all portions of the district, except along the immediate Atlantic coast from Savannah to Hatteras, where the amounts received were under 2 inches. The State averages did not differ materially from the average for the district as a whole, which was 4.07 inches, indicating an excess of about 1.42 inches. The greatest excess occurred on the extreme southeastern coast of Florida. Over the greater portion of the territory under discussion the precipitation ranged between 3 and 5 inches; the smallest amount for the month was 1.04 inches at Wilmington, N. C., and the greatest 10.49 inches at Homestead, Fla.

The periods of most frequent rains were the 1st, 4th to 15th, 17th to 18th, 23d to 24th, and 27th to 29th. In Virginia and the Carolinas the largest 24-hour falls occurred on the 6th, or 8th to 9th, and in the Gulf States generally during the last stormy period. Excessive rains occurred at comparatively few stations in Florida, Alabama, and Mississippi, and none in other portions of the district; the maximum being 5.66 inches on the 14th at Merritts Island, Fla. The number of days with rainfall was about 8 in every State in the section.

The snowfall for the month was unimportant. Traces fell at a few points in northern Georgia and northern Alabama on the 24th or 29th, and at 2 or 3 points in western North Carolina and Virginia on the 24th. An appreciable amount, 0.1 inch (unmelted), occurred only at Hot Springs, Va. Sleet fell at a few places in northern Georgia and Mississippi on the 12th.

RIVER CONDITIONS.

The river conditions during November present few features of interest. Mean river stages were generally higher than in October, but no floods of any importance occurred in any of the rivers in the district. Heavy rains on the 8th and 9th caused a sharp rise in the Cape Fear, Yadkin, and Neuse Rivers in North Carolina. In South Carolina there was a rise to nearly the flood stage in the lower Wateree on the 10th and 11th, and to slightly above the flood stage in the Santee River on the 11th, for which warnings were issued on the 9th; no damage of any consequence was reported. The average stage of the Black River at Kingstree, S. C., was the highest recorded for November, due mainly to unusually heavy rains on the closing days of October. None of the rivers in the Gulf States experienced any marked rise, maintaining comparatively low stages throughout the entire month.

MISCELLANEOUS PHENOMENA.

The prevailing winds for the month were from the northwest or north in all portions of the district except Florida, where they were from the northeast, and the wind movement was greater than usual for November. The average hourly velocity exceeded 10 miles an hour at Norfolk, Va.; Hatteras, N. C. (average 16.7 miles); Charleston, S. C.; Atlanta (average 13.9 miles), and Savannah, Ga.; Jacksonville, Miami, and Pensacola, Fla. The maximum velocity was 56 miles an hour from the northwest at Pensacola on the 12th, but the highest velocities were generally reported on the 24th, Savannah reporting 44 miles from the northwest, Atlanta 46 miles from the west, and Hatteras 48 miles from the northwest. The average number of clear days was 13, of partly cloudy days 8, and cloudy days 9. The period of cloudiness from the 1st or 2d to the 12th of the month, inclusive, was noteworthy, subsequently the higher wind movement from the northwest frequently dissipated the clouds, giving several fair, cold days.

Severe local storms.—A severe local windstorm occurred on the 18th at Cordele, Ga., between the hours of 1 and 2 o'clock in the morning, during which one building was demolished, the lighting system was interrupted, and wires and fences were blown down. Two policemen were injured by falling bricks.

TABLE 1.—*Climatological data for November, 1911. District No. 2, South Atlantic and east Gulf States.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Virginia.																				
Arvonia	Buckingham	350	7	44.4	− 2.0	74	12	20	3†	35	3.94	+ 1.80	0.85	0	9	12	8	10	sw.	Rev. P. F. Jones.
Bedford City	Bedford	947	1	43.3	.....	71	10	20	13	36	3.21	.....	1.18	0	9	7	13	14	3	w.	E. H. Taylor.
Buchanan	Botetourt	820	7								2.01	+ 0.34	0.44	0	9					D. D. Booze.
Calliaville	Brunswick	250	17	46.4	− 2.8	75	12	21	23	40	4.29	+ 2.27	1.11	0	9	14	7	9	w.	F. M. Gage.
Cape Henry	Princess Anne	20	37	50.4	− 1.7	75	12	31	13	33	2.90	+ 0.16	0.83	0	12	11	5	14	w.	U. S. Weather Bureau.
Catawba	Roanoke	1,760	1	42.0	.....	68	5	15	25	36	2.35	.....	1.20	T.	4	15	4	11	w.	State Bd. of Health Sanitm.
Charlottesville	Albemarle	800	22	44.2	− 3.5	69	11	20	13	32	3.88	+ 1.46	1.18	0	8	9	8	13	s.	Leander McCormick Observ.
Clarksville	Mecklenburg		17								4.48	+ 2.07	0.90	0	10					J. A. Ligon.
Columbia	Fluvanna	246	13	44.2	− 1.8	74	12	20	22	34	4.39	+ 2.39	1.00	0	8	8	11	11	w.	Chesapeake & Ohio Ry.
Covesville	Albemarle		1								4.02	.....	1.32	0	6					E. F. Cole.
Danville	Pittsylvania	413	11								3.49	+ 1.89	0.90	0	9					C. G. Watkins.
Diamond Springs	Princess Anne	25	1	49.5	.....	75	12	24	22†	41	4.60	.....	1.57	0	10	8	12	10	.....	Virginia Truck Exp. Station.
Hampton	Elizabeth City	5	28	48.0	− 2.8	67	12†	27	30	39	5.44	+ 2.92	1.35	0	12	18	2	10	nw.	Normal and Agr. Institute.
Hot Springs	Bath	2,195	19	37.4	− 3.4	65	11†	9	13	37	3.54	+ 1.49	1.61	0.1	9	14	6	10	.....	F. M. Terry.
Ivor	Southampton	87	2	48.4	.....	75	12	22	23	41	5.73	.....	1.30	0	6					N. & W. Ry. Exp. Farm.
Lassiter	Goochland	100	2								6.10	.....	1.15	0	9	17	2	11	.....	T. J. Davis.
Lexington	Rockbridge	1,060	34	40.2	− 3.3	68	11†	18	13	38	2.63	0.00	1.31	0	7	19	4	7	.....	Va. Military Inst.
Lynchburg	Campbell	685	40	43.5	− 2.6	69	10	22	13	39	3.22	+ 0.43	1.02	T.	12	9	8	13	nw.	U. S. Weather Bureau.
New Castle	Craig	1,300	2								3.56	.....	1.22	0	7					Miss J. L. Martin.
Newport News	Warwick	55	8	49.8	.....	73	12	28	13	30	5.38	.....	1.42	0	13	12	8	10	nw.	C. W. Ashby.
Norfolk	Norfolk	91	41	49.8	− 1.4	74	12	30	13	32	4.12	+ 1.40	1.51	0	12	10	8	12	s.	U. S. Weather Bureau.
Richmond	Henrico	144	32	45.0	− 3.8	72	12	26	13	38	4.33	+ 1.94	1.51	0	11	13	5	12	nw.	Do.
Rocky Mount	Franklin	1,150	17	42.2	− 3.6	68	10†	17	13	40	2.81	+ 0.25	0.80	0	9					G. W. B. Hale.
Saxe	Charlotte	350	8								4.02	.....	1.07	0	5					State Exp. Farm.
Spottsville (near)	Surry	15	23	48.2	− 0.2	75	12	22	23	47	5.28	+ 2.53	1.10	0	10	14	4	12	nw.	B. W. Jones.
Williamsburg	James City	70	20	49.6	+ 0.9	72	12	27	22†	33	4.66	+ 2.14	1.10	0	10	16	5	9	nw.	Eastern State Hospital.
North Carolina.																				
Albemarle	Stanly	700	....	47.8	.....	72	1†	21	22†	42	3.18	.....	1.09	0	12	14	6	10	sw.	M. J. Harris.
Beaufort	Carteret	10	10	55.8	− 0.3	77	7	32	25	34	2.03	− 0.53	0.97	0	11	19	3	8	nw.	H. D. Aller.
Belhaven	Beaufort	4	2	52.6	.....	75	12	25	23	43	1.90	.....	1.30	0	3	16	14	0	n.	A. L. Bell
Brewers	Wilkes	1,950	14	43.8	− 3.6	75	10	18	13†	42	3.71	+ 0.92	1.19	T.	11	13	7	10	w.	W. L. Brewer.
Caroleen	Rutherford	806	11	45.8	− 4.2	71	1†	20	25†	39	3.33	+ 0.75	1.17	0	8	15	8	7	nw.	S. B. Tanner.
Chalybeate Springs	Harnett	500	5	49.0	.....	76	12	20	26†	46	4.11	.....	1.53	0	11	18	3	9	n.	J. A. Smith.
Chapel Hill	Orange	500	53	48.3	− 1.6	73	6†	21	30	43	3.29	+ 0.51	0.61	0	12	18	4	8	nw.	Prof. A. H. Patterson.
Charlotte	Mecklenburg	773	35	46.2	− 4.2	71	12	25	25	39	3.36	+ 0.50	1.41	0	10	11	6	13	ne.	U. S. Weather Bureau.
Chimney Rock	Rutherford	1,150	1	45.9	.....	74	10†	22	13	42	3.56	.....	0.92	0	9	16	7	7	nw.	J. M. Flack.
Durham (near)	Durham	406	2								4.34	.....	1.22	0	10					J. C. Michie.
Eagletown	Northampton	66	6	49.1	.....	77	12	25	23	36	5.72	.....	1.92	0	13	13	12	5	sw.	J. T. Elliott.
Edenton	Chowan	30	17	51.6	0.0	72	12†	28	14†	35	4.06	+ 1.21	2.10	0	6	15	1	14	ne.	E. R. Conger.
Elizabethtown	Bladen	60									3.85	.....	1.64	0	7					J. W. Hall, jr.
Enfield (near)	Halifax	99									5.96	.....	1.87	0	11					T. S. Inborden.
Fayetteville	Cumberland	170	24	50.5	− 1.3	75	1†	23	13	47	4.06	+ 1.25	1.72	0	9	12	1	17	n.	Frank Glover.
Goldsboro	Wayne	102	41	50.6	− 0.6	75	12	28	29	37	4.44	+ 2.14	1.50	0	11	.....	.....	.....	n.	Mrs. N. B. Taylor.
Graham	Alamance	656	9								3.91	.....	1.23	0	12	.....	.....	.....	.....	Dr. W. R. Goley.
Greensboro	Guilford	843	30	45.0	− 3.6	70	11	23	13	36	4.07	+ 1.40	1.06	0	9	.....	.....	.....	ne.	A. H. Horry.
Greenville	Pitt	75	18								4.66	+ 1.99	1.84	0	13	.....	.....	.....	.....	R. M. Hearne.
Hatteras	Dare	11	37	55.5	− 1.2	72	12	37	13	28	1.05	− 3.62	0.37	0	9	11	12	7	ne.	U. S. Weather Bureau.
Henderson	Vance	508	18	46.3	− 3.2	72	12	24	13†	32	5.28	+ 2.53	0.99	0	10	9	12	9	ne.	Enoch Powell.
Kings Mountain (near)	Gaston	952	....	46.6	.....	75	1	22	22†	40	2.46	.....	1.44	0	9	9	7	14	w.	Rev. C. J. Strang.
Kinston	Lenoir	46	13	52.0	+ 0.9	80	12	25	23†	46	3.89	+ 1.56	1.25	0	12	12	6	12	w.	H. C. V. Peebles.
Lenoir	Caldwell	1,186	38	44.0	− 2.0	72	16	17	30	44	3.68	+ 0.59	0.96	0	8	19	1	10	n.	G. M. Goforth.
Lincolnton	Lincoln	904	6	47.0	.....	71	1	20	30	42	3.64	.....	1.00	0	9	.....	.....	.....	ne.	Blair Jenkins.
Louisburg	Franklin	375	20	47.2	− 1.2	74	12	24	23	35	4.52	+ 2.04	1.82	0	9	18	6	6	nw.	T. B. Wilder.
Lumberton	Robeson	102	28	50.0	− 2.0	78	12	25	22†	46	4.36	+ 2.14	1.59	0	10	.....	.....	.....	ne.	B. M. Davis.
Manteo	Dare	12	6	52.8	.....	71	27	26	23†	37	3.08	.....	2.22	0	5	15	8	7	nw.	U. S. Weather Bureau.
Marion	McDowell	1,425	19	43.6	− 5.3	69	12	19	25†	40	3.98	+ 0.91	1.03	T.	11	14	5	11	e.	Sergt. Thos. McGuire.
Middletown	Hyde	4	....	52.5	.....	74	12	27	23†	38	2.62	.....	0.93	0	10	14	10	6	nw.	J. S. Mann.
Moncure	Chatham	145	17	48.2	− 2.0	75	12	19	13	48	4.56	+ 1.97	1.76	0	10	17	1	12	nw.	B. J. Utley.
Monroe	Union	586	17	48.6	− 1.5	74	12	20	22	43	3.33	+ 0.43	1.83	0	9	11	7	12	ne.	T. A. Ashcraft.
Morganton	Burke	1,135	24	44.5	− 3.6	71	12	18	30	41	4.03	+ 0.32	0.86	0	10	15	6	9	nw.	J. B. P. Massey.
Mount Airy	Surry	1,048	23	43.6	− 2.8	69	10	19	22	41	3.82	+ 1.19	1.14	0	8	16	2	12	nw.	Prof. A. H. Merritt.
Mount Holly	Gaston	616	14								4.12	+ 1.47	1.73	0	8					J. W. Holland.
Nashville	Nash	190	7	49.0	.....	77	12	23	23	40	5.38	.....	1.75	0	11	12	6	12	n.	J. B. Boddie.
Neuse	Wake	266									4.65	.....	1.79	0	9	.....	.....	.....	.....	Gaston H. Mooneyham.
Newbern	Craven	12	29	53.0	− 1.0	78	7†	24	25†	48	2.39	− 0.54	0.83	0	8	.....	.....	.....	ne.	J. B. Hill.
Parkersburg	Sampson	121	....	51.2	.....	80	12	20	22	46	3.90	.....	1.30	0	9	8	12	10	n.	E. J. Conway.
Pinehurst §	Moore	650	7	48.6	.....	74	12	24	13	36	3.71	.....	1.10	0	8	19	0	11	se.	General Office.
Raleigh	Wake	390	40	47.8	− 2.4	75	12	26	30	40	4.26	+ 1.91	1.97	0	10	11	7	12	ne.	U. S. Weather Bureau.
Ramseur	Randolph	442	4	46.2	.....	73	1	19	22†	45	4.07	.....	1.00	0	10	14	5	11	n.	A. H. York.
Randleman	do	810	6								3.34	.....	1.34	0	7	.....	.....	.....	.....	J. R. Walton.
Reidsville	Rockingham	828	12								3.73	+ 1.16	.....	0	9	.....	.....	.....	.....	E. M. Redd.
Rockingham	Richmond	210	16	47.4[a]	− 4.4	73	7†	23	13†	45	1.47	− 1.09	0.40	0	7	.....	.....	.....	.....	H. S. Ledbetter.
Rocky Mount	Nash	105									4.95	.....	1.93	0	9	.....	.....	.....	.....	G. P. Womble.
Roxboro	Person	600	12	44.2	− 4.9	67	12†	21	29	44	2.33	− 0.28	0.53	0	10	13	1	16	n.	N. Lunsford.
Salem	Forsyth	1,000	16	43.0	− 5.0	68	12	20	22	37	3.94	+ 1.38	0.93	0	9	.....	.....	.....	.....	Rev. H. E. Rondthaler.
Salisbury	Rowan	760	27	46.8	− 3.7	70	7†	23	13	38	3.10	+ 0.47	1.24	0	7	19	1	10	n.	Miss Thelma Wilkinson.
Saxon	Stokes	900	19	43.4	− 3.5	70	12	18	30	38	4.56	+ 1.91	1.10	0	8	8	8	14	nw.	R. P. McAnally.
Scotland Neck	Halifax	80	7	49.0[b]	.....	77	20	23	14†	49	5.02	.....	1.57	0	11	15	2	13	n.	J. Y. Savage.
Selma	Johnston	225	21	47.4[f]	− 3.4	78	12	23	23†	39	4.70	+ 2.01	1.65	0	6	.....	.....	.....	.....	Dr. R. J. Noble.
Settle	Iredell	700	15	43.0	− 5.7	71	1	17	30	41	4.04	+ 1.31	0.77	0	9	14	3	13	nw.	C. H. Smith.
Sloan	Duplin	50	18	52.6	− 0.3	81	12	23	22†	43	1.99	− 0.83	1.00	0	4	18	6	6	n.	D. M. Sholar.
Smithfield	Johnston	151									4.51	.....	1.80	0	9	.....	.....	.....	.....	Edwin S. Sanders.
Snow Hill	Greene	80	6	51.0[a]	.....	78	12	21	22	46	3.90	.....	1.46	0	10	9	13	8	n.	L. J. H. Mewborn.
Southern Pines	Moore	519	21	50.9	− 2.1	74	12	25	22†	37	3.00	+ 0.25	1.05	0	7	17	3	10	ne.	Mrs. P. H. Beck.
Southport	Brunswick	18	56	56.0	− 0.7	75	8†	27	25	38	1.64	− 1.14	0.59	0	8	16	5	9	ne.	Mrs. C. E. Taylor.
Statesville	Iredell	950	23	45.6	− 1.2	70	7†	21	25†	40	4.78	+ 1.86	0.86	0	10	13	10	7	sw.	D. M. Thompson.
Tarboro	Edgecombe	50	26	48.8[a]	− 2.3	74	12	25	14†	42	4.87	+ 2.25	1.93	0	11	11	7	12	ne.	E. V. Zoeller.
Weldon	Halifax	81	39	46.0	− 2.5	76	12	25	23†	41	5.54	+ 3.09	1.79	0	13	.....	.....	.....	w.	H. S. S. Cooper.
Willard	Pender	51	3	52.5	.....	82	12	24	22†	42	2.50	.....	0.94	0	6	15	8	7	n.	J. H. Jefferies.
Wilmington	New Hanover	52	40	53.4	− 0.7	78	12	29	25	35	1.04	− 1.41	0.33	0	10	12	8	10	w.	U. S. Weather Bureau.

TABLE 1.—*Climatological data for November, 1911. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
South Carolina.																				
Allendale	Barnwell	186	23	49.8	− 5.8	81	20	23	25	51						17	2	11		Richard Hiers.
Batesburg	Lexington	656	23	51.2	− 3.0	76	1	23	25	37	4.10	+ 1.64	1.07	0	8	14	1	15	e.	E. J. Hite.
Beaufort	Beaufort	20	25	56.2	− 3.0	77	12	30	30	30	2.11	− 0.07	1.42	0	4	11	12	7	nw.	Miss Lillian H. Rice.
Blackville	Barnwell	296	22	54.0	− 1.7	80	11†	24	24†	43	2.95	+ 0.94	1.18	0	12	11	4	15	sw.	Miss M. E. Lange.
Blairs	Fairfield	293	6								3.31		1.40	0	6	15	3	12	n.	John R. Ragsdale.
Bowman	Orangeburg	160	10	51.8	− 2.7	80	1†	20	25	47	4.17	+ 2.46	1.94	0	9	11	10	9	w.	B. O. Evans.
Calhoun Falls	Abbeville	508	18								3.89	+ 1.35	1.63	0	6	18	3	9	w.	L. M. Parker.
Camden	Kershaw	222	45	54.6		77	12	25	25	41	3.02	+ 0.85	1.24	0	8	13	3	14	ne.	W. C. Brown.
Catawba	York	562	6								4.24		1.69	0	11	13	3	14	n.	James C. Faris.
Chappells	Newberry	402	6								2.46		1.08	0	6	14	1	15	sw.	W. R. Zimmerman.
Charleston	Charleston	48	41	55.8	− 2.3	79	12	29	30	33	1.49	− 1.38	0.90	0	10	11	10	9	n.	U. S. Weather Bureau.
Cheraw	Chesterfield	144	23	51.6	− 0.8	79	1	25	25	39	3.48	+ 1.33	1.97	0	10	14	2	14	nw.	J. H. Powe.
Clemson College	Oconee	850	20	47.4	− 3.7	78	12	22	25†	34	4.77	+ 1.97	1.62	0	6	14	4	12	w.	Prof. John N. Hook.
Columbia	Richland	351	25	50.2	− 3.6	77	12	25	30	38	3.05	+ 0.82	1.23	0	11	11	6	13	ne.	U. S. Weather Bureau.
Conway	Horry	25	19	55.9	+ 1.5	83	12	28	22	39	2.66	+ 0.36	0.82	0	6	13	0	17	w.	P. C. Quattlebaum.
Darlington	Darlington	175	16	49.7[b]		78	12	24	22†	39	3.63	+ 1.21	1.44	0	8	15[b]	3[b]	10[b]		D. C. McCall.
Dillon	Dillon	100	7	50.7	− 2.8	80	12	25	22†	49	1.79	− 0.40	0.56	0	10					A. E. Rowell.
Effingham	Florence	106	19								3.52	+ 1.08	1.50	0	5	13	1	16	ne.	H. D. McCall.
Ferguson	Berkeley	51	3	51.6	− 3.9	77	11	25	30	41	3.58	+ 1.35	1.46	0	9	13	1	16	nw.	Dr. J. R. Des Portes.
Florence	Florence	136	23	50.3	− 3.6	82	17	26	24	44	3.52	+ 1.21	0.99	0	6	14	1	15	ne.	H. K. Gilbert.
Georgetown	Georgetown	12	18	56.6	− 3.3	82	12	28	25	38	2.40	+ 0.18	1.20	0	5	15	7	8	w.	A. P. Hazard.
Greenville	Greenville	989	19	46.6	− 3.0	77	1	19	30	40	4.41	+ 1.13	1.59	0	9	17	0	13	ne.	Spartan Goodlette.
Greenwood	Greenwood	671	23	47.8	− 4.2	74	12	21	30	40	3.13	+ 0.35	1.38	0	6	13	0	17	w.	M. M. Calhoun.
Heath Springs	Lancaster	568	10	47.6		70	7†	23	22	29	3.47		1.70	0	5	14	4	12	n.	J. A. Weaner.
Jacksonboro	Colleton	13	3	56.2[b]		80	12	28	24†	37	2.60		1.33	0	4				w.	W. E. Haskell, jr.
Kingstree	Williamsburg	54	23	50.2	− 5.3	75	17	25	22†	43	3.56	+ 1.38	1.25	0	8	11	2	17	ne.	A. O. Matthews.
Liberty	Pickens	900	17	47.6	− 3.3	74	1	20	30	29	4.76	+ 2.10	1.56	0	8	15	6	9	w.	J. T. Boggs.
Little Mountain	Newberry	711	18	50.9	− 2.8	80	17	22	30	37	2.93	+ 0.63	0.90	0	11	18	7	5	n.	J. M. Sease, M. D.
Meriwether	Edgefield		2	51.6		78	1	22	25	50	2.75		1.16	0	5	8	3	17		Wm. S. Middleton.
Newberry	Newberry	502	7	49.4	− 4.3	77	12	23	25	37	4.14	+ 1.21	1.95	0	9	9	6	15	w.	W. G. Peterson.
Pelzer	Anderson	873	6								4.40		1.78	0	7	14	2	14	w.	John M. Ward.
Pinopolis	Berkeley	55	18								3.30	+ 0.83	1.52	0	8					Miss E. P. Ravanel.
St. George	Dorchester	109	23	55.3	− 0.4	80	12	25	30	39	2.84	+ 0.91	1.52	0	5	26	0	4		G. F. Lewis.
St. Matthews	Calhoun	209	23	52.4	− 2.5	75	12	29	25†	40	3.37	+ 1.28	0.85	0	8	11	0	19		J. S. Wannamaker.
Saluda	Saluda	530	9	50.2		77	1†	21	25	40	3.29		0.95	0	7	15	3	12	n.	Mrs. F. V. J. Maxwell.
Santuc	Union	512	16	48.8	− 2.7	73	1†	23	25†	36	4.03	+ 1.25	1.87	0	9	11	6	13	w.	E. W. Jeter.
Smith Mills	Williamsburg	62	16								3.28	+ 0.79	1.22	0	7	14	1	15	n.	W. G. Walker.
Society Hill	Darlington	192	20	49.1	− 3.4	75	12	25	24	46	3.46	+ 1.18	1.85	0	5	13	6	11	ne.	Maj. J. J. Lucas.
Spartanburg	Spartanburg	875	20	46.2	− 5.3	74	1	24	13†	37	4.28	+ 1.50	1.70	0	7	8	1	21		F. P. Robinson.
Summerville	Dorchester	75	14	55.0	− 1.0	80	12	26	30	38	2.41	− 0.14	1.36	0	11	9	17	4	e.	Miss E. H. Gadsden.
Trenton	Edgefield	620	18	49.6	− 5.9	77	1	23	30	36	3.27	+ 0.77	1.10	0	8	11	9	10	w.	C. A. Long.
Walterboro	Colleton	69	7	56.8[a]		83[a]	12	24[a]	25	41	2.60		1.86	0	7	14	7	9		J. A. Westerberg.
Winnsboro	Fairfield	545	21	49.0	− 4.7	70	1†	24	30	36	1.40	− 0.78	0.50	0	5	18	9	3	w.	J. W. Seigler.
Winthrop College	York	690	12	48.6	− 3.9	72	1†	21	25	34	3.20	+ 0.78	0.93	0	10	17	2	11	sw.	E. R. Rivers.
Yemassee	Hampton	23	16	52.0	− 4.1	78	12	23	26	40	3.90	+ 2.02	1.65	0	11	1[c]	0	16		J. G. Hutson.
Georgia.																				
Abbeville	Wilcox		8								3.22		1.35	0	9	14	0	16	n.	W. H. Calhoun.
Adairsville	Bartow	772	19	46.5	− 3.9	70	12	21	13	34	4.43	+ 1.70	1.00	0	7	17	3	10		Mrs. R. C. Evins.
Albany	Dougherty	230	25	55.8	− 2.0	82	17	25	30	37	4.54	+ 2.26	1.97	0	16	13	2	15	ne.	George C. Brosnan.
Allapaha	Berrien	293	22			81	9				2.64	+ 0.79	0.68	0	7	5	11	14	w.	James T. Austin.
Americus	Sumter	362	28	53.8[a]	− 2.7	75[a]	11†	23[a]	30		3.50	+ 0.77	1.70	0	6	16[f]	2[f]	12[f]		F. P. Harrold.
Athens	Clarke	694	34	47.6	− 3.6	74	1†	22	30	37	4.35	+ 1.50	1.53	0	12	12	3	15	nw.	C. D. Cox.
Atlanta	Fulton	1,218	46	47.0	− 4.8	73	16	21	30	44	3.56	+ 0.23	1.64	0	11	11	3	16	w.	U. S. Weather Bureau.
Augusta	Richmond	180	45	51.7	− 2.7	78	12	27	30	41	3.95	+ 1.29	1.58	0	9	12	4	14	w.	Do.
Bainbridge	Decatur	110	19	56.3	− 2.1	83	11	24	30	38	5.54	+ 4.04	1.85	0	8	14	0	16	sw.	Mrs. C. O. Wimberley.
Barnesville	Pike	875	2								2.70		0.58	0	9				ne.	Prof. C. W. Mobley.
Blakely	Early	300	20	55.6	− 2.2	85	7	24	30	42	2.52	− 0.05	2.10	0	3	12	10	8	n.	Ralph M. Hobbs.
Butler	Taylor	650	10								3.90	+ 1.50	1.25	0	8	13	4	13	n.	Mrs. Mamie F. Wallace.
Canton	Cherokee	894	20								5.89	+ 2.63	1.97	0	7	11	1	18	nw.	G. W. Evans.
Carlton	Madison	557	12								3.72	+ 1.60	1.39	0	8	14	0	16	w.	M. C. Power.
Clayton	Rabun	2,100	17	44.3[a]	− 5.1	70[a]	16	20[a]	22	40	5.84	+ 2.32	1.69	0	7	16	1	13	e.	A. J. Duncan.
Columbus	Muscogee	262	23	52.8	− 2.9	79	17	25	30	42	4.11	+ 1.48	1.24	0	8	15	1	14	n.	A. J. Land.
Covington	Newton	800	19								4.03	+ 1.31	1.80	0	7	7	6	17	e.	Mrs. Sarah E. Cruse.
Cuthbert	Randolph	446	11	52.8	− 4.2	76	10	22	29†	34	3.13		2.16	0	3	13	7	10		Prof. W. McMichael.
Dahlonega	Lumpkin	1,519	21	45.0	− 5.0	69	16	19	13†	32	6.40	+ 3.04	1.71	T.	10	13	7	10	nw.	Prof. B. P. Gaillard.
Diamond	Gilmer	2,020	21	44.4[a]	− 4.2	71[a]	16	17[a]	13	40	4.88	+ 1.12	1.03	T.	9	14	5	11		R. A. Kimzey.
Dublin	Laurens	452	17								4.28	+ 1.77	2.25	0	8	14	0	16	nw.	Mrs. M. E. Martin.
Eastman	Dodge	361	19	54.8[a]	− 3.2	78[a]	12	24[a]	30	33	3.37	+ 1.47	1.89	0	8	10[d]	2[d]	14[d]		Miss Annie Bohannon.
Eatonton	Putnam		8					23[a]	30		2.36		0.70	0	7					Prof. W. C. Wright.
Elberton	Elbert	710	20	49.0	− 4.1	73	1†	21	30	34	3.74	+ 1.10	1.60	0	7	12	11	7	e.	H. A. Roebuck.
Experiment	Spalding	946	11	50.0	− 3.7	72	1†	23	30	29	2.86	+ 0.62	1.25	0	7	9	12	9		Martin V. Calvin.
Fort Gaines	Clay	166	24	54.4	− 1.8	80	17	24	30	43	4.40	+ 1.88	2.10	0	7	14	1	15	ne.	Miss Eva T. Graham.
Gainesville	Hall	1,254	34	44.4	− 5.4	71	16	18	30	38	4.51	+ 1.52	1.66	0	9	10	3	17	w.	W. C. Walker.
Glennville	Tatnall		6	54.6[a]		80[a]	12	26[a]	30	37	1.87		0.85	0	7	14	10	6	nw.	William C. Barnard.
Gore	Chattooga		12	47.1	− 2.4	76	16	20	13	45	4.77	+ 1.83	1.05	0	10	13	4	13	n.	H. M. Ponder.
Greensboro	Greene	598	9	49.8		77	16	22	25	41	3.53		1.04	0	7	11	3	16	w.	R. L. Caldwell.
Griffin	Spalding	975	22	48.2	− 5.0	70	11†	22	13†	28	3.75	+ 1.44	1.45	0	9	12	7	11	nw.	V. P. Enloe.
Harrison	Washington	245	12	52.0	− 2.9	79	16	22	25†	44	4.14	+ 1.60	1.85	0	8	18	2	10	nw.	A. W. J. Wood.
Hartwell	Hart	838	2	47.6		73	1†	22	30	39	4.28	+ 1.87	1.22	0	7	10	11	9	e.	W. B. McMullan.
Hawkinsville	Pulaski	235	16	50.8	− 3.7	76	16	24	25†	41	3.03	+ 0.62	1.70	0	8	14	1	15	nw.	R. H. Wood.
Lisbon	Lincoln		4	50.0		77	1	19	30	42	2.49		0.85	0	7	13	4	13		B. J. DuBose.
Lost Mountain	Cobb		11	45.2	− 6.9	69	19	19	13	30	3.48	+ 0.76	1.05	T.	6	2	20	8	e.	A. N. Mayes.
Louisville	Jefferson	259	19	52.8	− 2.3	78	12	23	25	38	3.89	+ 1.68	2.05	0	4					J. C. Little.
Lumber City	Telfair		2								3.90		1.30	0	9	9	3	18	e.	Walter A. Hilton.
Lumpkin	Stewart	650	17	56.8	− 1.1	79	17	21	25	34	3.78	+ 1.35	2.10	0	6	9	11	10	nw.	A. W. Latimer.
Macon	Bibb	370	33	51.2	− 3.4	75	13	27	30	41	2.94	+ 0.05	1.11	0	12	13	4	13	nw.	U. S. Weather Bureau.
Marshallville	Macon	500	19	52.6	− 3.9	78	15†	22	25	44	3.03	+ 0.23	1.30	0	10	12	4	14	w.	E. C. Bryan.
Milledgeville	Baldwin	276	23	51.4	− 2.1	77	12	25	25	38	3.49	+ 1.21	1.06	0	9	14	3	13	nw.	Prof. O. M. Cone.
Millen	Jenkins	158	24	54.7	− 0.6	88	12	26	30	45	3.60	+ 1.63	1.60	0	6	12	0	18	nw.	M. G. McComb.

TABLE 1.—*Climatological data for November, 1911. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Georgia—Continued.																			
Mineral Bluff	Fannin	1,571	....	44.2	.....	70	11†	16	13†	45	3.44	.....	1.22	T.	8	5	22	3	n.	J. M. Clement.
Montezuma	Macon	292	6	.....	.....	.....	.....	.....	.....	.....	3.05	.....	1.31	0	10	12	2	16	nw.	J. C. Collins.
Monticello	Jasper	800	16	50.7	− 4.4	78	16	24	30	33	2.89	+ 0.29	1.02	6	9	15	0	15	.....	Miss Maude C. Penn.
Newnan	Coweta	959	22	49.8	− 2.6	77	17	20	30	39	7.91	+ 5.09	2.00	0	9	15	2	13	ne.	Mrs. Ida J. Milner.
Norcross	Gwinnett	1,078	....	.....	.....	.....	.....	.....	.....	.....	5.26	.....	1.66	0	10	11	6	13	.....	W. O. Medlock.
Point Peter	Oglethorpe	1,000	22	49.0	− 2.3	73	16	20	30	36	4.16	+ 1.42	1.77	0	6	11	6	13	.....	C. M. Witcher.
Poulan	Worth	365	20	58.8	+ 1.9	87	9†	24	30	46	1.85	− 0.40	0.55	0	12	1	26	3	.....	C. T. Merritt.
Putnam	Marion	.....	11	53.0	− 3.8	79	18	22	25†	43	3.30	+ 0.77	2.00	0	4	14	5	11	nw.	Mrs. J. M. Collum.
Quitman	Brooks	173	25	57.8	− 1.6	84	10	25	30	42	4.75	+ 2.76	2.20	0	4	15	0	15	ne.	A. B. Jones.
Ramhurst	Murray	1,363	18	48.8	− 3.3	71	16	21	13	37	4.97	+ 1.06	0.84	T.	8	12	9	9	n.	D. E. Humphreys.
Resaca	Gordon	657	17	.....	.....	.....	.....	.....	.....	.....	3.45	+ 0.39	1.20	0	5	14	1	15	s.	D. A. Norton.
Rome	Floyd	576	55	46.5	− 4.7	74	16	22	13†	42	5.28	+ 1.97	1.55	0	12	11	6	13	w.	W. M. Towers.
St. George	Charlton	.....	4	59.2	.....	85	7	28	25†	43	6.36	.....	2.50	0	10	5	21	4	ne.	A. N. Lund.
St. Marys	Camden	20	19	60.2	+ 0.1	85	7	27	30	43	3.07	+ 1.05	1.89	0	7	5	13	12	ne.	David C. Sterling.
Savannah	Chatham	65	61	56.3	− 1.9	80	12	28	30	36	1.23	− 0.90	0.69	T.	8	7	13	10	ne.	U. S. Weather Bureau.
Statesboro	Bulloch	253	11	54.1	− 3.3	80	12	25	25†	35	3.05	+ 0.99	1.34	0	6	11	14	5	.....	W. C. Cromley.
Talbotton	Talbot	750	18	52.3	− 2.5	80	16	24	30	42	4.30	+ 1.26	1.25	0	9	15	1	14	nw.	Dr. E. L. Bardwell.
Tallapoosa	Haralson	1,150	12	47.5	− 4.5	76	16	20	13†	42	4.60	+ 1.92	1.97	0	7	14	5	11	nw.	Elmer C. Bishop.
Thomasville	Thomas	273	28	56.6	− 2.6	84	7	25	30	42	2.53	− 0.07	1.39	0	12	12	7	11	nw.	U. S. Weather Bureau.
Tifton	Tift	370	....	57.2[c]	.....	81[c]	11	26[c]	25	....	2.78	.....	1.48	0	6	.....	.....	.....	.....	K. C. Moore.
Toccoa	Stephens	1,050	26	46.4	− 4.1	73	19	21	30	40	5.47	+ 2.48	1.80	0	10	13	5	12	n.	Mrs. Alice Starke.
Valdosta	Lowndes	210	6	59.2	.....	87	7†	24	30	46	5.40	.....	3.00	0	5	9	2	19	w.	Miss Annie Twitty.
Valona	McIntosh	10	14	60.5[d]	+ 1.5	82[d]	7†	27[d]	29	40	3.15	+ 1.06	1.85	0	4	12[d]	10[d]	4[d]	.....	J. M. Atwood.
Washington	Wilkes	630	23	49.4	− 3.4	75	12†	23	30	36	3.85	+ 1.13	1.60	0	9	14	3	13	ne.	Miss Ella B. Smith.
Waycross	Ware	131	22	58.0	− 1.5	85	7†	27	25†	44	6.04	+ 4.46	2.70	0	6	14	0	16	n.	Thomas Sasser.
Waynesboro	Burke	86	20	52.9	− 1.8	79	11†	20	25	43	4.95	+ 3.17	2.05	0	7	11	5	14	nw.	Mrs. H. W. Blount.
West Point	Troup	620	22	49.2	− 5.0	72	17†	24	25	37	3.84	+ 1.04	1.20	0	9	16	0	14	nw.	E. N. Dunn.
Woodbury	Meriwether	641	10	.....	.....	.....	.....	.....	.....	.....	3.13	+ 0.93	1.02	0	7	13	4	13	.....	E. T. Riggins.
Florida.																			
Apalachicola	Franklin	24	7	60.2	.....	82	12	29	30	29	4.01	.....	1.80	0	6	11	14	5	ne.	G. H. Whiteside.
Arcadia	De Soto	61	10	71.8	+ 4.4	90	9	40	30	37	1.44	+ 0.10	0.57	0	9	9	11	10	ne.	C. S. Bushnell.
Archer	Alachua	92	26	.....	.....	86	10	.....	.....	.....	4.05	+ 1.85	1.39	0	6	.....	.....	.....	.....	R. B. Hodgson.
Avon Park	De Soto	150	13	71.2	+ 3.4	92	9	39	30	31	1.90	+ 0.19	0.50	0	11	8	10	12	ne.	O. R. Thacher.
Bartow	Polk	115	23	68.0	+ 1.4	90	10	38	30	25	4.75	+ 3.07	1.39	0	15	5	8	17	ne.	William Hood.
Blountstown	Calhoun	.....	2	57.7	.....	86	9	25	30	41	1.67	.....	1.37	0	3	6	16	8	s.	C. L. Hobbs.
Bradentown	Manatee	10	27	70.2	+ 3.3	85	9†	43	25†	23	3.07	+ 1.47	1.37	0	4	7	15	8	.....	H. H. Ten Broeck.
Brooksville	Hernando	126	18	68.0	+ 2.6	89	11	33	30	32	3.18	+ 1.58	2.05	0	5	13	13	4	ne.	C. C. Peck.
Carrabelle	Franklin	10	12	59.4	− 3.5	82	7†	26	30	33	1.24	− 0.79	0.45	0	6	.....	.....	.....	.....	J. J. Blomquist.
Cedar Keys	Levy	10	22	65.8	+ 2.6	84	8†	31	30	34	3.42	+ 0.07	1.20	0	8	.....	.....	.....	ne.	J. B. Lutterloh.
Clermont	Lake	105	18	69.8	+ 2.3	92	9†	35	30	29	4.03	+ 3.42	3.50	0	7	11	11	8	n.	S. S. Fesler
De Funiak Springs	Walton	193	13	56.8	− 2.3	85[a]	7	22	29	38	6.27	+ 2.67	4.30	0	7	15	7	8	n.	R. W. Storrs.
De Land	Volusia	27	14	68.2[a]	+ 3.8	87[a]	9	37[a]	25	30	4.98	.....	2.15	0	13	13	6	11	ne.	O. B. Webster.
Eustis	Lake	56	20	66.6[a]	+ 1.1	90[a]	9	33[a]	25	30	3.59	+ 2.12	1.70	0	9	.....	.....	.....	ne.	C. T. Smith.
Federal Point	Putnam	5	19	66.4	+ 2.7	87	7	32	30	35	3.84	+ 1.70	1.98	0	13	13	12	5	ne.	E. S. Hubbard.
Fenholloway	Taylor	75	4	.....	.....	.....	.....	27	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss E. Wigglesworth.
Fernandina	Nassau	10	18	60.6[e]	− 1.5	84[a]	9	29[f]	30	35	4.46	+ 1.98	1.62	0	7	9	11	10	ne.	W. B. C. Duryee.
Fort Meade	Polk	125	22	71.4	+ 4.6	97	1	40	30	30	4.18	+ 2.79	1.34	0	6	17	6	7	ne.	G. L. Brodrick.
Fort Myers	Lee	12	39	71.8	+ 1.2	86	14	44	30	26	1.53	+ 0.27	0.96	0	4	16	11	3	ne.	Miss M. M. Gardner.
Fort Pierce	St. Lucie	6	10	72.8[a]	+ 4.3	90[b]	8†	41[a]	30	26	2.00	− 1.42	0.50	0	8	.....	.....	.....	.....	T. C. Nicholson.
Gainesville	Alachua	176	17	63.0	+ 0.1	85	11†	29	25†	38	4.53	+ 2.68	1.24	0	9	7	4	19	ne.	John Schnabel.
Grasmere	Orange	175	13	67.5	+ 1.5	91	10	33	25†	31	4.47	.....	2.50	0	11	20	5	5	.....	J. B. Escott.
Hilliard	Nassau	69	2	61.4	.....	88	7	26	25†	38	3.15	.....	1.70	0	3	17	6	7	.....	B. A. Tibbits.
Homestead	Dade	5	1	75.4	.....	91	2†	50	30	26	10.49	.....	4.00	0	15	17	7	6	e.	W. J. Krome.
Inverness	Citrus	43	11	65.5	+ 2.7	86	9†	33	30	29	4.24	+ 2.86	2.63	0	5	3	6	21	ne.	W. H. Miller.
Jacksonville	Duval	101	41	61.9	+ 0.6	85	7	29	30	33	2.68	+ 0.49	1.96	0	6	7	15	8	ne.	U. S. Weather Bureau.
Jasper	Hamilton	152	10	60.4	− 0.5	86	7	27	24†	42	3.01	− 1.61	2.00	0	3	6	6	18	ne.	Mrs. W. C. Caldwell.
Johnstown	Bradford	125	11	63.6	+ 2.6	88	12	26	30	42	4.31	+ 2.76	2.22	0	6	24	5	1	.....	A. M. C. Brasch.
Key West	Monroe	14	41	77.0	+ 2.7	86	9	54	30	16	6.00	+ 3.64	3.76	0	16	10	9	11	ne.	U. S. Weather Bureau.
Kissimmee	Osceola	65	18	70.0	+ 2.8	90	10	39	30	31	5.79	+ 3.98	1.75	0	8	4	18	8	ne.	J. A. Simpson.
Lake City	Columbia	210	26	62.2	+ 0.6	85	7†	26	30	37	4.53	+ 1.86	2.20	0	4	12	8	10	ne.	W. B. Knight.
Live Oak	Suwanee	109	11	.....	.....	88	18	.....	.....	39	2.16	− 0.10	1.59	0	3	.....	.....	.....	e.	J. D. Henry.
Macclenny	Baker	125	14	59.6	− 2.9	86	8†	28	28†	42	3.59	+ 2.12	2.10	0	6	3	19	8	.....	Griffing Bros. Co.
Madison	Madison	200	11	58.2	− 3.1	84	7†	26	30	34	6.17	+ 4.47	3.47	0	11	8	1	21	nw.	E. J. Vann.
Malabar	Brevard	24	17	71.2	+ 2.7	91	8	35	30	34	5.49	+ 3.25	0.73	0	15	13	10	7	se.	J. F. Farley.
Marianna	Jackson	80	8	57.6	.....	84	7	25	30	42	4.50	.....	2.64	0	9	15	1	14	sw.	W. J. Watson.
Merritts Island	Brevard	20	28	70.6	+ 2.0	86	9	39	30	23	8.17	+ 5.97	5.66	0	15	1	21	8	ne.	F. Ulrich.
Miami	Dade	47	10	75.8	+ 3.8	87	7	45	30	24	5.94	+ 3.39	1.64	0	18	4	12	14	ne.	U. S. Weather Bureau.
Middleburg	Clay	10	10	63.4	.....	88	13	29	25	50	3.09	+ 1.73	2.05	0	6	.....	.....	.....	.....	G. A. Chalker.
Molino	Escambia	49	9	56.2	.....	84	17	20	30	37	4.90	.....	3.25	0	4	22	2	6	n.	W. H. Trimmer.
Monticello	Jefferson	207	7	58.4	.....	84	7†	21	25	51	3.97	.....	1.95	0	5	21	2	7	n.	E. C. Potter.
Mount Pleasant	Gadsden	260	5	57.7	.....	85	7†	22	30	41	2.41	.....	0.95	0	7	11	3	16	n.	Miss Addie Grubb.
New Smyrna	Volusia	9	26	69.8	+ 4.8	91[a]	9	35	30	24	5.83	+ 3.09	2.64	0	17	5	14	11	n.	F. Nordman.
Orange City	do	39	17	68.1	+ 3.5	93	10	34	30	31	4.46	+ 2.78	2.45	0	9	10	10	10	nw.	J. D. Graham.
Orlando	Orange	111	18	69.8	+ 3.4	90	9	36	30	31	4.73	+ 3.26	2.75	0	7	4	12	14	ne.	James Thomson.
Pensacola	Escambia	149	31	58.3	− 1.3	80	7	25	30	25	3.98	+ 0.24	2.83	0	11	12	9	9	n.	U. S. Weather Bureau.
Pinellas Park	Hillsboro	20	....	70.0	.....	89	10	38	30	27	3.96	.....	2.45	0	7	8	9	13	e.	C. M. Deschant.
Plant City	do	121	17	68.7	+ 2.5	87	9	38	25†	29	3.03	+ 1.70	1.65	0	6	11	19	0	n.	E. B. Trask.
Rockledge	Brevard	28	3	71.8	.....	89	10	38	30	31	4.71	.....	0.85	0	10	7	15	8	ne.	J. H. White.
Rockwell	Marion	10	9	68.0[d]	.....	88[d]	10	32[d]	30	....	3.54	+ 1.89	2.00	0	8	.....	.....	.....	sw.	Dunellon Phos. Co.
St. Augustine	St. Johns	10	59	68.6	+ 4.6	92	7	32	30	41	3.80	+ 1.48	1.91	0	7	28	1	1	ne.	E. F. Joyce.
St. Leo	Pasco	140	14	67.6	+ 1.5	88	10	34	30	28	5.84	+ 4.23	2.98	0	7	9	11	10	e.	G. Schneider.
Satsuma Heights	Putnam	98	3	65.2	.....	87	9	32	30	30	4.40	.....	2.13	0	10	6	17	7	ne.	Satsuma Co.
Switzerland	St. Johns	10	18	64.2	+ 2.0	86	9†	31	30	39	3.10	+ 0.93	1.90	0	5	.....	.....	.....	.....	Mrs. W. C. Steele.
Tallahassee	Leon	192	24	58.1	− 1.5	81	7†	25	30	28	5.57	+ 3.03	2.00	0	8	14	5	11	n.	W. H. Markham.
Tampa	Hillsboro	79	21	68.0	+ 2.6	86	10	39	25	30	3.91	+ 2.19	2.36	0	6	4	14	12	ne.	U. S. Weather Bureau.
Tarpon Springs	do	20	26	69.1	+ 3.7	90	11	41	30	29	4.27	+ 2.56	2.33	0	6	12	11	7	w.	A. P. Albaugh.
Titusville	Brevard	16	15	70.6	+ 4.7	92	9	36	30	27	5.19	+ 2.71	1.22	0	19	9	11	10	e.	F. M. Taylor.
Wausau	Washington	250	11	57.2	− 1.6	84	7†	25	30	52	3.41	− 0.49	2.60	0	6	19	7	4	n.	Curtis Jones.

TABLE 1.—*Climatological data for November, 1911. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Alabama.																				
Alaga	Houston	105	6								3.70		2.06	0	7				n.	James L. Willis.
Anniston	Calhoun	728	20	48.6	− 3.3	75	17	22	25	44	5.04	+ 1.64	2.29	T.	11	9	6	15	nw.	U. S. Weather Bureau.
Ashville	St. Clair	685	18	48.0	− 3.6	75	12	21	25†	43	5.43	+ 2.82	1.91	0	7	14	7	9	nw.	George R. Cather.
Auburn	Lee	732	29	53.0	− 1.6	77	16†	22	30	35	3.74	+ 0.10	1.09	0	10	11	5	14	nw.	Dr. James T. Anderson.
Benton	Lowndes	149	10								4.69	+ 1.51	1.18	0	8				se.	S. T. Pruitt.
Bermuda	Conecuh		24	54.2[b]	− 2.3	82	6	22	30	43	3.16	+ 0.18	1.19	0	8	13	9	8	n.	M. J. Morris.
Birmingham	Jefferson	701	23	49.9	− 4.2	78	6	22	30	46	6.43	+ 3.04	2.77	T.	11	12	10	8	se.	U. S. Weather Bureau.
Calera	Shelby	500	10								5.84	+ 3.34	1.30	0	8				n.	L. G. Privett.
Camp Hill	Tallapoosa	738	10	52.1		78	8	21	25†	49	4.18	+ 1.55	1.28	0	9	16	7	7	n.	Dr. Lyman Ward.
Cedar Bluff	Cherokee	594	7								5.50		1.10	0	7	7	23	0		Joe L. Daniel.
Citronelle	Mobile	331	23	56.4	− 3.4	85	6	22	30	38	3.92	+ 1.04	1.89	0	9	16	6	8	n.	Rev. W. H. Rowe.
Clanton	Chilton	590	18	49.6	− 4.6	78	6	21	30	40	4.68	+ 1.82	1.23	0	10	11	0	19	n.	Wallace C. Edler.
Cochrane	Pickens	100	1								5.08		1.40	0	7				n.	T. H. G. Cook.
Cordova	Walker	334	20	47.6	− 4.2	76	17	16	27	46	3.92	+ 0.99	0.75	0	9	16	6	8	s.	Scott Maxwell.
Cullman	Cullman	802	3	47.4		84	17	19	25	42	3.51		0.82	T.	9	15	3	12	nw.	Eugene A. Grayot.
Dadeville	Tallapoosa	760	6								4.12		1.45	0	6				e.	Dr. W. B. Fulton.
Daphne	Baldwin		20	57.6	− 2.1	84	10†	25	30	34	5.70	+ 3.12	2.50	0	7	16	9	5	nw.	John H. Young.
Demopolis	Marengo		19								5.05	+ 2.78	1.12	0	9	15	5	10	nw.	George E. Pegram.
Eufaula	Barbour	200	27	51.2	− 4.4	76	17	21	30	36	4.00	+ 1.16	2.26	0	10	11	3	16	nw.	Dr. J. B. Whitlock.
Evergreen	Conecuh	285	27																	Robert L. Whitcomb.
Flomaton	Escambia	91	19	57.6	− 3.5	81	17	20	30	42	4.01	+ 0.88	2.00	0	6	11	14	5	n.	T. J. Farris.
Fort Deposit	Lowndes	520	27	50.8	− 4.9	77	17	23	30	38	4.15	+ 1.28	1.25	0	6	12	7	11	se.	J. F. Hattemer.
Gadsden	Etowah	621	27	49.0	− 2.6	76	11†	23	26	41	5.34	+ 2.34	1.74	0	9	9	3	18	nw.	D. P. Goodhue.
Goodwater	Coosa	826	16	48.5	− 5.7	77	17	21	13†	41	5.05	+ 2.17	2.37	0	10	10	4	16	n.	Miss Daisy Buice.
Greensboro	Hale	220	32	50.5	− 4.9	80	6	24	30	37	4.91	+ 1.43	1.06	0	8	15	2	13	n.	W. E. W. Yerby.
Greenville	Butler	444	10								2.47	− 0.63	1.32	0	5					E. M. Lewis.
Hamilton	Marion		15	49.1	− 3.9	87	6	13	30	47	4.35	+ 1.17	0.99	0	9	14	7	9	n.	Prof. H. O. Sargent.
Highland Home	Crenshaw		19	54.5	− 2.7	79	17	23	30	38	3.70	+ 0.58	1.59	0	7	17	7	6	nw.	Prof. Samuel Jordan.
Livingston	Sumter	160	27	48.2	− 5.6	80	6†	20	30	41	4.13	+ 1.28	1.10	0	6	15	0	15	w.	Robert L. King.
Lock No. 4	Talladega	510	14	49.8	− 2.3	78	12	22	25	41	5.64	+ 3.53	2.08	0	9	22	0	8	n.	U. S. Engineers.
Maple Grove	Cherokee		18	47.6	− 3.0	78	11†	19	30	38	4.66	+ 1.65	1.53	0	8	9	10	11	nw.	Mrs. A. L. Awbrey.
Mentone	De Kalb	1,595	4								2.97		1.10	0	4				se.	E. Mason.
Milstead	Macon		8								4.33		1.30	0	6				e.	Evie Oswalt.
Mobile	Mobile	84	39	57.4	− 0.1	80	10†	26	30	39	5.74	+ 2.00	3.23	0	8	14	7	9	n.	U. S. Weather Bureau.
Montgomery	Montgomery	240	39	52.4	− 3.3	78	6	25	30	40	4.20	+ 1.07	1.66	0	9	10	10	10	n.	Do.
Newbern	Hale		18	51.9	− 3.7	85	6	19	30	39	5.39	+ 2.87	1.02	0	8	15	6	9	n.	Dr. J. Huggins.
Oneonta	Blount	857	17	48.5	− 2.0	76	6†	20	25	43	4.79	+ 2.14	1.59	0	12	14	2	14	n.	Aquilla J. Ketchum.
Opelika	Lee	817	32	49.8	− 4.8	70	17	23	30	32	3.93	+ 0.81	0.98	0	9	12	2	16	n.	A. H. Read, jr.
Ozark	Dale	400	9	53.8		76	17	21	30	40	3.80		2.85	0	4	20	6	10	n.	Miss Lucy Sellers.
Prattville	Autauga	281	11	51.2		87	17	22	25†	46	3.24		0.97	0	9	13[a]	8[a]	8[a]		Jos. B. Bell.
Pushmataha	Choctaw		20	51.6	− 3.6	83	11	20	30	39	6.20	+ 3.39	1.98	0	9	10	9	11	sw.	W. N. Horn.
Selma	Dallas	147	31	50.8	− 4.5	81	6	21	30	38	4.31	+ 1.27	1.06	0	9	13	7	10	e.	Charles F. Brislin.
Spring Hill	Mobile	312	7	56.3		81	6†	24	30	39	6.15		3.17	0	9	13	5	12	n.	Spring Hill College.
Talladega	Talladega	554	21	50.4	− 2.9	78	6	23	13†	43	5.32	+ 2.39	1.90	0	8	13	7	10	nw.	W. E. Henkel.
Tallassee	Elmore		20								5.24	+ 2.42	1.56	0	9				nw.	P. A. Noble.
Thomasville	Clarke	385	20	50.4	− 5.2	80	11	17	30	43	5.60	+ 3.00	2.00	0	6	18	1	11	n.	J. G. Forster.
Troy	Pike	581	3	54.2		83	17	22	30	33	2.59		0.80	0	10	12	12	6	nw.	Frank L. Zimmermann
Tuscaloosa	Tuscaloosa	230	30	48.8	− 4.1	84	6	20	30	38	5.98	+ 3.06	1.45	0	10	16	0	14	se.	W. S. Wymann, jr.
Tuskegee	Macon		11	52.8	− 4.5	79	17	22	30	45	3.36	+ 0.51	1.38	0	5	6	17	7	n.	Prof. Geo. W. Carver.
Union Springs	Bullock	216	24	52.2	− 3.0	76	17	23	30	31	3.95	+ 0.68	1.65	0	7	11	12	7	e.	P. L. Cowan.
Uniontown	Perry	273	25	53.4	− 2.6	84	6	20	30	43	5.27	+ 2.47	1.70	0	6	14	9	7	nw.	F. D. Stevens.
Valley Head	De Kalb	1,031	26	46.6	− 2.3	74	16	17	30	42	4.77	+ 1.65	0.92	T.	7	15	4	11	n.	M. T. Floyd, M. D.
Wetumpka	Elmore	205	19	53.6	− 2.5	81	17	23	25†	42	4.07	+ 1.13	1.10	0	6	14	0	16	n.	U. S. Engineers.
Mississippi.																				
Agricultural College	Oktibbeha	424	21	50.2	− 3.8	84	7	17	30	43	4.28	+ 1.31	1.20	0	11	12	15	3	n.	J. H. Ricks.
Bay St. Louis	Hancock	28	18	57.6	− 2.5	85	6	24	30	34	3.78	+ 0.83	2.58	0	8	17	6	7	w.	Brother Stanislaus.
Biloxi	Harrison	24	20	54.7	− 5.1	79	11	24	30	31	3.95	+ 1.05	2.00	0	8	13[a]	5[a]	11[a]	nw.	Miss M. Josie Pope.
Booneville	Prentiss	504	17	47.0	− 4.8	75	6	17	30	35	3.70	− 0.07	1.14	0	6	12	11	7	n.	Dr. D. T. Price.
Brookhaven	Lincoln	500	23	51.6	− 5.0	84	6	19	30	45	6.25	+ 2.34	3.36	0	11	16	2	12	n.	W. J. Bee.
Columbia	Marion	110	7								5.28		1.48	0	8	13	13	4	n.	M. R. Drummond.
Columbus	Lowndes	191	23	48.3	− 5.2	84	6	18	30	45	4.62	+ 0.21	0.87	0	7	14	2	14	nw.	J. B. Love.
Crystal Springs	Copiah	168	19	50.8	− 5.8	83	6	20	30	44	5.04	+ 2.05	1.82	0	9	17	6	7		D. H. Miller.
Edinburg	Leake		3	48.4		81	6	15	30	42	4.84		1.61	0	9	17	3	10	n.	J. Y. Blocker.
Enterprise	Clarke	248	6								5.79		1.44	0	9	9	19	2	nw.	J. B. Thompson.
Fulton	Itawamba		2								4.18		0.87	0	6	14	2	14	n.	A. L. Summers.
Hattiesburg	Forest	189	18	55.4	− 2.2	84	6	22	30	43	4.38	+ 1.27	1.18	0	7	15	0	15	n.	T. C. Spence.
Hazlehurst	Copiah	460	21	51.1	− 5.8	83	6	19	30	54	4.10	+ 1.04	1.83	0	8	17	1	12	n.	J. D. Granberry.
Hickory	Newton	326	1								6.79		1.89	0	7	16	9	5	n.	T. N. McMullen.
Jackson	Hinds	280	24	53.6	− 1.4	87	6	18	30	44	4.50	+ .99	2.01	0	11	10	13	7	ne.	A. S. Nall.
Lake	Scott	446	23	50.4	− 2.7	81	11	20	30	42	3.88	+ 1.14	2.04	0	7	12	4	14	nw.	Mrs. Eddie McNeill.
Laurel	Jones	241	7	53.4		84	6	19	30	41	5.60		2.25	0	9	14	7	9	nw.	Thomas W. Flynt.
Leakesville	Greene		17	54.3[d]	− 4.0	80	6	20	30	46[d]	4.55	+ 1.54	1.83	0	5	13[d]	2[d]	11[d]		Dr. Sam Pool.
Louisville	Winston	561	22	51.9	− 2.5	83	6	18	30	42	4.55	+ 1.60	1.73	0	7					B. T. Webster.
McNeill	Pearl River	240	8	57.7		82	10	23	30	38	3.38		1.60	0	6	13	9	8	nw.	Prof. E. B. Ferris.
Macon	Noxubee	185	23	48.5	− 5.7	83	6†	18	30	44	5.41	+ 3.01	1.35	0	7	15	3	12	w.	Finis E. Carleton.
Magnolia	Pike	415	15	54.8	− 3.4	83	11†	20	30	42	4.51	+ 1.54	1.38	0	10	10	9	11	s.	Miss Ruby V. Roberts.
Meridian	Lauderdale	375	21	50.6	− 2.6	83	11	20	30	45	5.82	+ 1.68	1.77	0	8	15	7	8	n.	U. S. Weather Bureau.
Merrill	George	76	6								4.50		2.00	0	7	17	12	1	n.	L. C. Helms.
Monticello	Lawrence	209	4	53.0		84	7†	17	30	45	5.75		1.73	0	14	12	10	8	nw.	Dr. G. A. Teunisson.
Okolona	Chickasaw	311	23	47.4	− 4.6	81	6	18	30	42	4.28	+ 1.28	1.00	0	7	10	9	11	sw.	D. H. Snell.
Pearlington	Hancock	10	23	56.6	− 2.6	82	6†	21	30	37	3.81	+ 0.65	1.83	0	5	12	7	11	ne.	Miss Annette Koch.
Porterville	Kemper		6	51.0		84	6	18	30	46	6.75		2.52	0	8	15	5	10	nw.	I. S. Rea.
Shubuta	Clarke	197	6								5.80		1.64	0	9	13	15	2	n.	George A. Floyd.
Tupelo	Lee	278	12								2.21	− 1.11	0.63	0	6	14	10	6	s.	W. H. St. John.
Waynesboro	Wayne	191	24	50.4	− 4.7	80	6	20	30	41	6.41	+ 3.55	2.10	0	8	13	3	14	n.	R. S. Burke.
Woodland	Chickasaw		2								5.09		1.10	0	7					Tallahatchie Drainage Dom.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1911. District No. 2, South Atlantic and east Gulf States.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Virginia.																																
Arvonia	James					.04	.85	.30		.55			.23		T.	.24			.39						.50				.84			3.94
Bedford City	Roanoke					T.	1.18		T.	.40	T.		.38			.11			.35						.40				.39			3.21
Buchanan ‖	James						.10	.32		.37				.10		.21			.44						.26				.05	.16		2.01
Callaville	Chowan	T.				.53	.48	.10		1.11			.18			.08			.80			T.			.71				.30			4.29
Cape Henry	Coast	.14			.10	.15	.17	.03	.20	.63			.31			.14			.12						.31				.60			2.90
Catawba	Roanoke						1.20		*	*	.60		.05			.50									T.				T.	T.		2.35
Charlottesville	James	T.				T.	1.18	T.		.51	.05		.38			.40			.41						.31				.64			3.88
Clarksville ‖	Roanoke					.50		.70		.90				.45		.10			.48						.49	.41			.12	.33		4.48
Columbia	James					.06	1.00	.60					.34		.58			.43							.60				.78			4.39
Covesville	....do						1.32			.45			.50	.60					.45						.70							4.02
Danville ‖	Roanoke					.12	.24	.66		.62	.04			.23		.06			.52						.26	T.			.25	.49		3.49
Diamond Springs	Coast	.42				.35	.22			1.57	.07			.53		.25			.23										.69	.27		4.60
Hampton	....do	.22			T.	.53	.03	.36		1.35	.03			.39		.21			.16			T.			.85	T.			1.25	.06		5.44
Hot Springs	James	.05					1.61			.10			.52			.08			.60			T.			.23	.05			.30	T.		3.54
Ivor	Chowan					1.30		.56		1.30				.35											1.27				.95			5.73
Lassiter	James				.10		.75	1.15		.51			.52			.75			.62						1.00				.70			6.10
Lexington	....do				T.		1.31			.26			.11		.29				.23						.31				.12			2.63
Lynchburg	....do				.03		1.02		.17	.22	.01		.21		.04	.12			.33				.08	.36					.63			3.22
New Castle ‖	....do					.14	1.22		.05	1.10			.65												.25				.15			3.56
Newport News	Coast	.21			.03	.56	.22	.27	.04	1.35			.38			.19			.13			.04			.55				1.42			5.39
Norfolk	....do	.14			.04	.22	.23		.34	1.19			.37		.02	.17			.21			T.			.45				.74			4.12
Randolph ‖	Roanoke						T.	.96		.77				.61					.56						.43	.10			T.	.62		4.05
Richmond	James	T.			.28	.01	.69		.12	.51			.22		.03	.12		T.	.49		T.				1.51				.35			4.33
Rocky Mount	Roanoke					.13	.80	.07		.49			.29			.07			.32						.20				.49			2.81
Saxe	....do						1.00		.75									1.07							.55				.65			4.02
Spottsville (near)	Chowan	.13			.40	.46	.47		.48	.62			.56						.60						.81				.75			5.28
Williamsburg	James	.10				.25	.20	.60		.91				.20		.30			.25						1.10				.75			4.66
North Carolina.																																
Albemarle	Pedee				.02	.11	.54	.06	.26	1.09			.03		.03	.12			.20						.10				.62			3.18
Beaufort	Coast	.97					.04	.04		.21	.02					.27			.04						.10	.05			.19	.10		2.03
Belhaven	Pungo								1.30																.30				.30			1.90
Brewers	Pedee				.13	.02	1.19	.27		.36	.03		.38					T.	.73	.01					T.				.57	.02		3.71
Caroleen	Santee					.10	1.17		.41	.74		.02	.27						.41						.21							3.33
Chalybeate Springs	Cape Fear	.16			.03	.26	.16	.22	.22	1.53			T.			.25			.06						.23				.99			4.11
Chapel Hill	....do	.01			.02	.57	.21		.42	.61	.02		.24		.18				.33						.39				.29			3.29
Charlotte	Santee				.05	T.	.93		1.07	.34	T.	T.	.03		.11			.04	.07				T.	.12				.60			3.36
Chimney Rock	....do				.13	.02	.92		.45	.10			.50						.64						.20				.60			3.56
Durham (near)	Neuse				.84	.34	.32	.12	.14	1.08						.47			.35						.32			.36				4.34
Eagletown	Chowan	.40			T.	.25	.42	.35	.10	1.82			.38		T.	.24			.22						.50	.10			.90	.04		5.72
Edenton	Coast							.13	.10	2.00			.13			.50												1.20			4.06
Elizabethtown ‖	Cape Fear		.27					.23		1.64					.15														.40	1.11	.05	3.85
Enfield (near) ‖	Tar	.17				.60		.65		1.85	.02			.15		.15				.85					.05	.15				1.32		5.96
Fayetteville ‖	Cape Fear	.43				.04		.28		1.72				T.		.18									.03	.18				.14	1.06	4.06
Goldsboro ‖	Neuse	.48				.52	.02	.30		1.50	.05					.15			.02						.01	.39				1.00		4.44
Graham ‖	Cape Fear					.18	.01	.65		1.22	.01			.15		.18			.74						.26	.09			.09	.33		3.91
Greensboro ‖	....do					.18	*	.65		.96	.10								.96						.38	.04			.52	.28		4.07
Greenville ‖	Tar	.60				.26		.25		1.83	.01			.01		.26			.02	T.					.09	.37			.02	.88	.06	4.66
Hatteras	Coast	.37			.10		T.	.06	T.	.07						.12			.01						.06				.18	.08		1.05
Henderson	Tar & Roanoke				.79	.33	.62		.99	.23			.42		.62				.44						.46				.38			5.28
Kings Mount'n (near)	Santee					1.44	.44	.02	.05	T.			.15			.02			.07				.15					.12				2.46
Kinston	Neuse	.65					.31	.05	.15	1.10	.07		.16			.16			.01						.17				1.02	.04		3.89
Lenoir	Santee						.96		.26	.52	.02		.48						.88						.23				.33			3.68
Lincolnton	....do				T.	T.	1.00	T.	.39	.61	T.	.05	.02		.02			.50					.30						.75			3.64
Louisburg ‖	Tar	.06				.83		.47		1.82	T.			.05		.15			.22						.12					.80		4.52
Lumberton ‖	Lumber	.40					T.	.17	T.	1.59	.01		T.			.11			.08						.25	.20			.25	1.30		4.36
Manteo	Coast				.04					2.22															.38				.32	.12		3.08
Marion	Santee				.09	.04	1.03	.02	.34	.66	.02	T.	.46		T.				.56					T.	.25				.51			3.98
Middletown	Coast	.82			.01	T.	T.	.05	T.	.93						.16			.04						.07	.05			.43	.06		2.62
Moncure ‖	Cape Fear	.05				1.47		.31		1.76				.06		.21			.28						.12				.05	.25		4.56
Monroe	Pedee					.15	.28	.15	.47	1.30				T.	T.	.15			.08						.15				.54			3.33
Morgantown	Santee				.05	.16	.86	.02	.26	.57			.55						.79						.22				.55	T.		4.03
Mount Airy	Pedee					.16	1.14		.20	.36			.50						.06						.54			.26				3.82
Mount Holly ‖	Santee					.20		.94		1.73				.06		.12			.40										.42	.25		4.12
Nashville ‖	Tar	.15				.29	T.	.54		1.75	.02			.15		.25			.25						.02	.50			T.	1.46		5.38
Neuse ‖	Neuse					1.02		.32		1.79				.08		.22			.30						.10	.14				.68		4.65
Newbern ‖	....do	.83						.09		.78							.09				.07					.16			.05	.32		2.39
Parkersburg	Cape Fear	.20					.30	.05	.50	.60			T.			.20			T.						.50				1.30	.20		3.90
Pinehurst	Lumber					.78	.12		1.10			.48					.12		.09						.24				.78			3.71
Raleigh	Neuse				.16	.51	.23		.92	1.05	T.		.07		.15				.34						.19				.64			4.26
Ramseur	Cape Fear						.40	.28	.25	1.00			1.00		.08			.33					.03		.35				.35			4.07
Randleman ‖	....do							.78		1.34				.14		.15			.50						.34				.09			3.34
Reidsville ‖	....do					*	*	*		*	2.12								.54						.26				.36	.45		3.73
Rockingham	Pedee				.20		.35		.20							.20		.07						.05					.40			1.47
Rocky Mount ‖	Tar	.22				.19		.70		1.90	.03			.15						.23						.30				1.30		4.95
Roxboro ‖	Roanoke	.01				.33	.01	.35		.37	.19			.18		.18		.18											.53			2.33
Salem	Pedee					.27	.93		.28	.54			.38		.11				.55						.30				.60			3.94
Salisbury ‖	....do						.10	.70		1.24			.05	.20		.15			.66													3.10
Saxon ‖	Roanoke				.20		.86		.61				.48		.10				1.10						.29				.92			4.56
Scotland Neck	Tar	.33				.24	.40	.18	.14	1.57			.45			.21			.17						.47				.86			5.02
Selma	Neuse				.70		1.05		.75						.20				T.						.35				1.65			4.70
Settle	Pedee				.35		.77		.33	.52		T.	.49		.04				.62						.16				.76			4.04
Sloan	Cape Fear						.18		.10	.90			T.						T.										.81			1.99
Smithfield ‖	Neuse	.25				.30		.33		1.80						.17			.02	T.					T.	.29			.02	1.30		4.51
Snow Hill	....do	.50					.35	.04	.12	1.46			.03			.25									.29				.79	.07		3.90
Southern Pines	Cape Fear					.35	.10	.20	.25	1.05			T.		T.				T.						.45				.60			3.00
Southport	....do	.50					.09		.17	.06						.04			.23						.02				.44	T.		1.04
Statesville	Pedee		.2			.75	.67		.22	.75			.30		T.	.36			.47						.30				.86			4.78
Tarboro ‖	Tar	.03				.17		.52		1.93	.01		T.			.27			.19						.02	.45			.03	.75		4.87
Weldon ‖	Roanoke	.37				.74	.02	.43		1.78	.01			.14		.15			.28	T.					.10	.31			.06	1.35		5.54
Willard	Cape Fear	.06					.15			.94									T.						.20				.60	.05		2.50
Wilmington	....do	.01					.20			.30	.03				.04	.03			.06						.05				.30	.02		1.04
South Carolina.																																
Batesburg ‖	Edisto	.26				.43		.47	.15	1.07									.40										.92	.40		4.10
Beaufort	Coast						.44		.23						T.			T.						T.	.02				1.42	T.		2.11
Blackville ‖	Edisto	.50				.02		.20	.05	.23	.01			.02		.05			.50						.09				1.18	.10		2.95
Blairs ‖	Broad							.80		1.40					.04										.13				.70	.24		3.31
Bowman	Edisto						.18	T.	.29	T.	.08	T.	.06						.37					.07	.04				1.94	1.14		4.17

TABLE 2.—*Daily precipitation for November, 1911. District No. 2*—Continued.

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total.
South Carolina—Con.																																
Calhoun Falls	Savannah							1.40		1.63			.36												.06			.41	.03		3.89
Camden	Wateree	.06				.32		.32		1.24						.23			.10									.64	.12		3.02
Catawba	Catawba	.03				.06	.02	.63		1.69			T.	.04		.18			.15					.12				.54	.78		4.24
Chappells	Saluda						.12		.20	1.08	.62					.16												.28			2.46
Charleston	Coast	.01			T.	.01	.05		.31	.03			T.		.02	.04		T.	.09				T.	T.				.90	.03		1.49
Cheraw	Pedee	.18				.13		.27		1.97				.03		.16			.04					.02				.18	.50		3.48
Clemson College	Savannah						1.62		.72		1.05		.25											.13				1.00			4.77
Columbia	Congaree				.03		.36		.79	.32		.01	.04		.21				.04				.02	T.			.01	1.22			3.05
Conway	Waccamaw	.50						.09	.55		T.									.39				T.				.82	.31	T.	2.66
Darlington	Pedee							.12	.09	1.44				.06		.14			.12									1.00	.60		3.63
Dillon	Little Pedee	.06			T.	T.	.10	.01	.48	.56					T.	.14		T.	.16				.02	.18					.08		1.79
Effingham	Lynches	.45						.02		1.30						T.			T.									1.50	.25	T.	3.52
Ferguson	Santee	.90						.03	.04	.30			T.	T.		.20			.40									1.46	.20	.05	3.58
Florence	Pedee	.44				T.		.14		.99						.17												.98	.80		3.52
Georgetown	Coast						.35		.15									T.	.35									.35	1.20		2.40
Greenville	Saluda					.12		1.20	T.	1.59	T.	T.	.08	.12					.28					12				.85	.05		4.41
Greenwood	do							1.02	.05	1.38			.08						.12									.48			3.13
Heath Springs	Wateree				.10		.70		1.70	.30																		.67			3.47
Jacksonboro	Edisto	.49					.22												.56				T.				1.33		T.		2.60
Kingstree	Black	1.25						.12		.32						.20				.48								.90	.22	.07	3.56
Liberty	Savannah	.02			.04	T.	1.50		1.40		T.	T.	.20			T.		.35					T.	.15				1.10			4.76
Little Mountain	Saluda	.05			.12	.10	.70	.15	.90	.70			.05		.05	.03			.08													2.93
Meriwether	Savannah				.11	T.	.52	T.	.50	.46	T.	T.	T.	T.	T.			T.	T.									1.16			2.75
Newberry	Saluda				.01		.62		.90	1.05		T.	.03		.08				.08					.15				1.22			4.14
Pelzer	do					T.	.02	1.26		1.78			.06	T.		T.			.30					T.				.92	.06		4.40
Pinopolis	Cooper				.80		.12		.10						.17				.45				.02					1.52	.12		3.30
St. George	Edisto	.65						.25											.22									1.52	.20		2.84
St. Matthews	Santee	.63						.30	.05	.80						.10			.40									.82	.27		3.37
Saluda	Saluda						.53	.95	.57				.10		.12				.17					.04				.85			3.29
Santuc	Broad				T.	.02	1.08		.69	1.18			.02		.04				.18									.78			4.03
Smith Mills	Pedee	1.01						.08	T.	.62				.11		.08			.16					.04					1.22		3.28
Society Hill	do					.01	.15		1.85															.05				1.40			3.46
Spartanburg	Broad					.05		1.35		1.70			.08	T.					.28					.07				.75			4.28
Summerville	Ashley	.20					.13		.12	.08			T.		.03	.13		T.	.17				.04	.02				1.36	.13		2.41
Trenton	Edisto				.18		.53	.02	.53	.58				.15				.18										1.10			3.27
Walterboro	Ashepoo				T.	T.	.17		.04	.10			.02		T.	.13			.28				T.	T.				1.86			2.60
Winnsboro	Broad						.50	.20			T.	.20			.25								T.					.20			1.40
Winthrop College	Catawba				.06	T.	.60	.06	.50	.93	.03	T.	.05		T.	.09			.04								.84				3.20
Yemassee	Combahee	.80						.27		.37	.02			.05		.05			.35					.05				1.65	.30	.09	3.90
Georgia.																																
Abbeville	Ocmulgee	.63			T.		T.	.41	T.	.31	.04	T.	T.		T.	.21			.11					.07				1.35	.09		3.24
Adairsville	Coosa						1.00		1.00	.35		T.	.70						.75				T.	.33			T.	.30			4.42
Albany	Flint	.72			.06	.02	.04	.70	.01	.12	.08	.06	.01	.04		.10			.35					.20				1.91	.06		4.54
Allapaha	Allapaha	.30						.68		.47						.06		.50										.37	.26		2.63
Americus	Flint	.30						.60		.67				.03				.20										1.70			3.50
Athens	Oconee	.35				.05	.02	1.37	.09	1.53			.02	.13					.30					.02				.44	.03		4.35
Atlanta	Chattahoochee				T.		1.01	.01	1.64	.01	T.	.02	.11					.23	.22					.02			.24	.05		3.56
Augusta	Savannah				.02		.30	T.	.27	.09	T.	.01	T.		.19			T.	.83					T.			.23	1.35			3.95
Bainbridge	Flint	1.37			.05			.11		.61			T.						1.26					.12				1.85	.17		5.54
Barnesville	do	.07					.50	.05	.45	.45			.11						.42						.01			.58			2.70
Blakely	Chattahoochee						.32		T.										.10								2.10				2.52
Butler	Flint	.30						1.05	.38	.40					.12				.35					.05				1.25			3.90
Canton	Coosa		.32			T.	T.	1.97	T.	1.65					.58				.82					.48					.07		5.89
Carlton	Savannah	.15				.07	.09	1.40	.07	1.39									.16									.39	T.		3.72
Clayton	do						1.69		.84	.84			.49	.40				T.						T.	.75		T.	.82			5.84
Columbus	Chattahoochee	.10				T.		1.24	.67	.31	T.	T.	T.	.10					.39					.07				1.17			4.11
Covington	Ocmulgee	.25						1.05	.15	1.80	.05								.33									.40			4.03
Cuthbert	Chattahoochee						.53		.44																		2.16				3.13
Dahlonega	do	.27			.13	.01	1.71		.78	1.11	T.	T.	.35					T.	.65					.59			T.	.60	T.		6.40
Diamond	Tennessee				.03		1.03		.52	.80		T.	.58						.78				.02	.38			T.	.74	T.		4.88
Dublin	Oconee					T.		.61	.07	.72		T.		T.		.22			.21				T.		.10			2.25	.10		4.28
Eastman	Ocmulgee						T.	.45	.05	.12	.02					.48			.34						T.			1.89	.02		3.37
Eatonton	Oconee	.20					.22		.70	.25			.05						.30									.54			2.36
Elberton	Savannah	.05			T.		1.60	T.	.80	.62	T.		.10						.17					T.				.40			3.74
Experiment	Chattahoochee						.45		1.25	.40			.08						.24					.06				.40			2.86
Fort Gaines	do	.27			T.			1.28		.40				.05					.25					.05				2.10			4.40
Gainesville	do	.25					.05	1.50	.08	1.66			.05						.57					.12				.53			4.81
Glennville	Altamaha				T.		.36		.19	T.			.04		.04			.13						T.			.85	.26			1.87
Gore	Coosa	.01			T.		1.05		.85	.49		.12	.57						.58					.26			.06	.78			4.77
Greensboro	Oconee	.78						.64	.15	1.04					.14		T.		.32									.46			3.53
Griffin	Chattahoochee	.35			T.		.05	.55	.25	1.45					.25				.17					.08				.60			3.75
Harrison	Ogeechee		.10				.64		.60							.20		.65					.06	.05				1.85			4.14
Hartwell	Savannah	.14			.10		1.22		.80	.91								.34										.77			4.28
Hawkinsville	Ocmulgee	.06						.10	.12	.92		.02				.10								.01				1.70			3.03
Lisbon	Savannah						.85	.55		.08			.04						.35					.02				.60			2.49
Lost Mountain	Chattahoochee						.95		1.05				.20						.65					.09							3.48
Louisville	Ogeechee								1.20						.20				.38								2.05				3.89
Lumber City	Ocmulgee	1.30					.02		.60	T.	.17			.02		.08			.25									1.24	.22		3.90
Lumpkin	Chattahoochee							1.08	T.	.24			T.						.10	.10			.16				2.10				3.78
Macon	Ocmulgee							.51	.10	.69	.02	.01		.09		.02			.23	.14				.02			.85	.26			2.94
Marshallville	Flint	.11			T.	T.	.10	.60	.14	.31	.04	T.	.09		T.	T.		T.	.23					.11				1.30			3.03
Milledgeville	Oconee	.18					.02	.51	.17	.74	T.			.12		.03			.66									1.06	T.		3.49
Millen	Ogeechee	.60						.50		.45									.30									1.60	.15		3.60
Mineral Bluff	Tennessee				.05		.13		.55				1.22						.94				.02	.35			.18		T.	T.	3.44
Montezuma	Flint						.87	.07	.43	.01	.03	.01			.06			.22						.04				1.31	T.		3.05
Monticello	Ocmulgee	.19					.05	.50	.22	1.02				.10					.28					.03				.50			2.89
Newnan	Chattahoochee	.45						1.00	2.00	1.20	.40			1.40					.60					.62				.24			7.91
Norcross	do	1.14					.04	1.00	.08	1.66				.28					.52					.10				.42	.02		5.26
Point Peter	Savannah	.15					1.43		1.77				.17						.18									.46			4.16
Poulan	Suwanee	T.					.55	.03	.12	.34	.01	.01	T.	.09	.03				.31					.03				.23	.10		1.85
Putnam	Flint	.20					.90		.20																		.00				3.30
Quitman	Suwanee	2.20						.12											1.24								.19				4.75
Ramhurst	Coosa				T.		.80		.67	.47		.02	.84						.73					.33				.21	T.		4.07
Resaca	do							.98	1.20				.42						T.									.52			3.45
Rome	do	.05				.05	T.	1.17	.10	1.55	.03	.04	.30	.28			.03		.80					.41					.50	T.		5.28
St. George	St. Marys	2.50	.03		T.				T.	.12	.08						.05		.67	.89			T.	T.	T.			1.80	.22	.02	6.36
St. Marys	do				.12		T.		T.	.10								.15	.76					T.				1.77	.12		3.07
Savannah	Savannah				.01		.23		.07	.14	T.	T.	.01		.01			T.	.07					T.			T.	.69	T.		1.23
Statesboro	Ogeechee						.40		.61	T.	.02	T.	T.					T.	.38					T.			1.34	.24			3.06

TABLE 2.—*Daily precipitation for November, 1911. District No. 2*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Georgia—Contd.																																
Talbotton	Chattahoochee						.75	.05	1.25	.15	.03		.20						.47						.20			1.20				4.30
Tallapoosa ||	Coosa	T.					.05	.92	1.97					.35					.73						.13			.55			4.00
Thomasville	Ocklocknee			T.	.01		.08		.12	.05		.01	T.		.05	.02		T.	1.39						.02			.47	.15	.18	2.53
Tifton	Suwanee						.20		.67						.11				.31						.01				1.48			2.78
Toccoa ||	Savannah	.22				.10	.13	1.35	.05	1.80			.25												.67				.85	.05		5.47
Valdosta ||	Suwanee	3.00						T.		.10									1.00							T.			.95	.35		5.40
Valona	Ogeechee								.04	.26			T.		T.			T.	1.85								1.00					3.15
Washington ||	Savannah						.16	.90	.23	1.60	.07	.19	.03						.19										.48			3.85
Waycross ||	Satilla	2.70						.04		.13									2.45										.60	.12		6.04
Waynesboro ||	Savannah	.65						.40	.55	.42						.27			.61										2.05	T.		4.95
West Point ||	Chattahoochee	.03						.63	.50	1.20			.03	.18					.40						.03				.84	T.		3.84
Woodbury ||	Flint	.47							.50	.25	1.02								.30						.04				.55			3.13
Florida.																																
Apalachicola	Coast						.05	.10	T.				T.		.44				.79					.83					1.80			4.01
Arcadia	Peace Creek	.57		.09			.01									.09			.01	.18									.04	.41	.04	1.44
Archer	Waccasassa							.45		1.13					T.	.02			.94						T.				1.39	.12		4.05
Avon Park	Kissimmee	.42	.01	.50	.02	.02						T.		T.	T.	T.			.10	.03	.03			.03	T.		T.		.30	.44		1.90
Bartow ||	Peace Creek	.33		.44	.67	.07		.02					.19			.15	.16			.64	.10	.01						.03	.12	1.39	.53	4.75
Blountstown ||	Apalachicola																		.15						.15				1.37			1.67
Bradentown	Manatee	.73																		.60									1.37	.37		3.07
Brooksville	Withlacoochee															.60			.20	.08									2.05	.25		3.18
Carabelle	Coast	.4					.02	.45			.06														.42				.05	.24		1.24
Cedar Keys	....do									.66	.07		.02			.45			.42						.47				1.20	.13		3.42
Clermont	Lake	.15													.20	.10			.10	.18									3.50	.40		4.63
De Funiak Springs ||	Choctawhatchee	T.			.20			.25		.70			.02						.40						.40			4.30				6.27
De Land	St. Johns	.50	.01	.94	T.	.05	T.	.17	.01			.08		T.	.08	.11			.27	.21							T.		2.15	.40		4.98
Eustis	Lake	.48		.13													.28		.29	.17	.12								.12	1.70	.30	3.59
Federal Point	St. Johns	.27	T.	T.	.04	.02	.02	.54	.02	.05	.02				.17	.01			.33										1.98	.37		3.84
Fernandina ||	Coast	1.62	.02						.01	T.						T.			1.21	.06	T.				T.			1.33	.21	T.	4.46
Fort Meade	Peace Creek		T.	.27	T.	T.										.77			1.00	.05							T.	1.34	.75		4.18
Fort Myers	Caloosahatchee	T.	T.	T.										T.	.96	.03			T.	.37	T.			T.		T.		T.	.17		1.33
Fort Pierce	Indian	.40	.50	.20		.30								.20						.20	.10									.10		2.00
Gainesville ||	Lake	1.11							.69		.38					.11	.21			.28									1.24	.44	.07	4.53
Grasmere	....do	.57	.03	.30		.03		T.				.09			.10	.23			.16	.11									2.50	.35		4.47
Hilliard	Nassau					T.	T.																						1.70			3.15
Homestead	Coast	.4	4.00	1.73	.95	.10								.28	.09		.01	.50	.45	1.00										.03	.02	10.49
Inverness ||	Withlacoochee															.10			.73									2.63	.44	.34	4.24
Jacksonville	St. Johns			T.	T.	T.	T.	.03	T.	T.	T.				T.			.28	.19						.02				1.96	.20		2.68
Jasper	Suwanee								.25										.76											2.00		3.01
Johnstown	....do						.10			.56			.51					.59										2.22	.38			4.31
Key West	Coast	.11	.03	.03	.05	.02					T.	T.	.01	.44	.10	T.	.05	.37	.05	1.94	2.14	.30		T.						.03	.32	T.	6.00
Kissimmee	Kissimmee	.10		.90								T.				1.12			1.05	.15	.20								1.75	.52		5.79
Lake City	Suwanee	2.20			T.		T.	T.	T.	T.								T.	.36						T.				1.87	.10		4.53
Live Oak	....do																1.59										20		.37			2.16
Maccleny	St. Marys				.05				.05								.50	.60										2.10	.29			3.89
Madison ||	Suwanee	3.47			.03	T.		.03	.05	.31	.12	T.	T.			.02			.73							.02			1.23	.16		6.17
Malabar	Indian	.06	.46	.35	.26	.22							.02	.10	.73	.44				.67	.15			.09	.39				.65	.30		5.49
Marianna ||	Apalachicola				.06			.04		.49				.02		.04		1.09						.03				2.64	.09		4.50
Merritts Island	Indian	.59	.23	.28	.01	.35	.09					.14		.07	5.66	.07					.21			.11			.03	T.	.32		.01	8.17
Miami	Coast	.07	.60	.23	1.34	.01						.01	.10	.84	.04	.30	.05	.10		.12	.26	1.62		.05	.03					.17		5.94
Middleburg	St. Johns							.08		.05	.05								.65										2.05	.21		3.09
Molino	Escambia			.20			T.		.30															1.15				8.25				4.90
Monticello	Aucilla								.22	.40									1.95										1.00	.40		3.97
Mount Pleasant	Apalachicola						.10	.03							.45				.65						.13				.95	.10		2.41
New Smyrna ||	Coast	.50		.80	.05	.15	.30	.03	.07			.05			.10	.07	.10			.34	.13				.04				.04	2.64	.42	5.83
Orange City	St. Johns	.26	.09	1.04	.03	T.									.10	.05				.20									2.45	.24		4.46
Orlando	....do	T.	T.	.75	T.	.07	T.					T.				T.		T.	.25	.05	.21			T.					2.75	.65		4.73
Pensacola	Coast			T.	.01		.03		.18	.01	.01		.01						.49	.01					.40	T.		2.82	.01			3.98
Pinellas Park	....do	.12														.45			.10	.40	.10				T.			2.34	.45		3.96
Plant City	Hillsboro			.35												.12		.30		.29									1.65	.32		3.03
Rockledge	Indian			.15	.58	.77							.28		.72	.10			.08	.81									.85	.37		4.71
Rockwell	Withlacoochee	.12									.04					.13			.72		.11								2.00	.24	.18	3.54
St. Augustine	Coast	.03			.21	.30		.53											.57										1.91	.25		3.80
St. Leo	Withlacoochee	1.62														.47			.20	.24	.04								2.98	.29		5.84
Satsuma Heights	St. Johns			.13	.04		T.	.67		.07					.03	.07		.43	.49										2.13	.34		4.40
Switzerland	....do						.13			.05					.45				.57											1.90		3.10
Tallahasse ||	Ocklocknee	1.60			.05			.10		.65						T.			2.00						.05				.75	.37		5.57
Tampa	Coast			T.		T.						T.				.40			.15	.53	.09				T.				2.36	.38		3.91
Tarpon Springs	....do	.52														.40			.35	.28	T.				T.				2.33	.39		4.27
Titusville	Indian	.28	.18	1.13	.19	.42	.02	.01				.05		.08	.47	.10			.24	.14	.05			.25	.04					.84	.68	.02	5.19
Wausaw	Choctawhatchee				.20			.10	.40	.07																			2.60	.04		3.41
Alabama.																																
Alaga ||	Chattahoochee	1.02	T.		T.		.06		.12		T.	T.		.12		T.			.04						.28			2.06	T.		3.70
Anniston	Coosa				T.		1.16	.05	2.29		T.	.02	.51					.47	.06					.04	.01			.40	.03	T.		5.04
Ashville	....do						1.35		1.91	.05	T.	.05							.80					T.	.37				.90			5.43
Auburn	Tallapoosa	.01			T.		.71	T.	.97	.33		T.	.35					.24						.01	.03			.04	1.05			3.74
Benton ||	Alabama							1.04	.97	.28	T.		.48	.14					.42						.18				1.18			4.69
Bermuda	Escambia				.13		.47		1.02	.10			.11						.06									1.19				3.16
Birmingham	Black Warrior					T.	1.16	.11	2.73	.01		.02	.90					.76	.03					.08				.66	.02	T.		6.43
Calera ||	Coosa							1.30	1.10	1.19	.02		.40						1.12					.03					.66			5.84
Camp Hill	Tallapoosa	.08					.82		1.28	.42			.22	.01											.05				.91			4.18
Cedar Bluff	Coosa	.70		.61			.40	.93				.86												.90				.02	1.10			5.50
Citronelle	Alabama				.21		.18	T.	1.04	.02	.15	T.	.15					.08						.20				1.89	T.			3.92
Cianton ||	Coosa	.03						.82	.87	1.23		.05	.15	.10					.53						.13				.77			4.68
Cochrane ||	Tombigbee						.01		1.15	.80			1.00						.50						.22				1.40			5.08
Cordova	Black Warrior						.70	.48			.40	.75	.20	.32	.25											.21	.61						3.92
Cullman	....do					.07		.82	T.	T.		.10	.40					.56						.15	.02			.46	.33	T.		3.51
Dadeville ||	Tallapoosa	.37						.61	.59	1.45				.21															.89			4.12
Daphne	Coast				.75		.15		.10		T.		T.					T.						1.30	.20			2.50	.70			5.70
Demopolis ||	Tombigbee				.06	.76	1.05		.77				.16	.02		.95									16				1.12			5.05
Eufaula ||	Chattahoochee	.16			T.			.70	.08	.24	.02		.02	.08					.38						.06				2.26			4.60
Flomaton	Escambia		T.	.10			.52			T.			.06					T.						.71			.62	2.00			4.01
Fort Deposit ||	....do							1.20	.60	.65				.25		.20													1.25			4.15
Gadsden ||	Coosa	.04					.06	.88	.04	1.74				.74		.76									26				.82			5.34
Goodwater ||	....do	.45						.70	.08	1.39	.02		.04	.14		.42									12				.79			5.05
Greensboro ||	Black Warrior						.80		.95	.84		.04	.47															1.06				4.91
Greenville ||	Escambia		.15					.32		.48				.20					1.32													2.47

TABLE 2.—*Daily precipitation for November, 1911. District No. 2*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Alabama—Contd.																															
Hamilton	Tombigbee					T.	.55		.64	.02			.80					.10	.45					.99	T.			.50	.30			4.35
Highland Home	Escambia						.82		1.06	.05		T.	.10						.05					.03				1.59			3.70
Livingston ‖	Tombigbee							.50	1.10	.97			.46						.50									.60			4.13
Lock No. 4	Coosa						1.20	.02	2.08	.05			.70						.63					.13				.10	.73			5.64
Maple Grove	do				T.	T.	.76	.09	1.52	T.	.06	.15	.41				.67							.56				.43		T.		4.66
Mentone ‖	do						.96	.11	1.10	T.		.80																	T.		2.97
Milstead ‖	Tallapoosa							.60	.40	1.00									.40					.63					1.30			4.33
Mobile	Coast				.18		.54		.72	T.	T.		.02					.02	.02					1.01				3.23				5.74
Montgomery	Alabama				T.		.63	.14	1.54	.01	.01	T.	.44					.21						.09				1.13				4.20
Newbern	Black Warrior						.88	.95	.84		.05	T.	.47					.78						.40				1.02				5.39
Oneonta	do				.02		.70	.04	1.59	.10	.03		.85						.72					.05	.08			.08	.53			4.79
Opelika ‖	Tallapoosa	.28				T.	T.	.58	.53	.72	T.		.07	.27					.44						.06				.98			3.93
Ozark ‖	Coast	T.							.20									.55						.20		2.85						3.80
Prattville	Alabama				T.		.52	.12	.97	.05	T.	T.	.37					T.	.30					T.	.05			.68	.18			3.24
Pushmataha	Tombigbee						1.63	.07	1.98	.03			.64						.28					.22				1.28	.07			6.20
Selma ‖	Alabama	.04						.73	.77	1.06			.16	.20					.34						.09				.92			4.31
Spring Hill ‖	Coast				.11	T.	.06	.57	.02	1.47			.03						.16						.56				3.17			6.15
Talladega	Coosa						.71	.05	1.90	.66			.41						1.08					T.	.15			T.	.36			5.32
Tallassee ‖	Tallapoosa	.18						.86	.51	1.56			.02	.42					.29						.10				1.30			5.24
Thomasville ‖	Tombigbee				T.		T.		2.00	1.09	.02		.25	T.											.85				1.39			5.60
Troy	Escambia				.02		.64		.27	.02		.02	.08						.13					T.	.01			.80	.60			2.59
Tuscaloosa ‖	Black Warrior	T.					.35	.74	1.00	1.45		.03	.32	.31					.57						.16				1.05			5.98
Tuskegee	Tallapoosa						.77		.07										.19					.35	1.38							3.36
Union Springs ‖	do							1.05	.23	.55			.15					.27					.05				1.65				3.95
Uniontown	Black Warrior						1.05	.05	1.70				.31													.90			1.26			5.27
Valley Head	Coosa						.90		.90			.45	.92						.60					.40				T.	.60	T.		4.77
Wetumpka ‖	do							.83	.52	1.10				.30					.35										.97			4.07
Mississippi.																															
Agricultural College	Tombigbee						.15	.15	1.20	.10	.20	.10	.50					.10	.60					.20				.98	T.			4.28
Bay St. Louis	Coast						.46		.45		.01		.05					T.	.05					.18				2.54	.04			3.78
Biloxi	do				.02		.15		.62	T.			.04						.04					.36				2.00	.72			3.95
Booneville	Tombigbee						1.14		.73		T.		.74					.38						.28				.43				3.70
Brookhaven ‖	Pearl						.60	.12	3.36	.25	.03	.02	.20						.09					.07	.70				.81			6.25
Columbia ‖	do						.30	.21	.58	.36			.78	.14					.65						.58				1.48			5.28
Columbus ‖	Tombigbee	T.					.84		.87	.55			.58						.80						.12				.86			4.62
Crystal Springs ‖	Pearl						.15		1.82	.38		.04	.92						.63					.15	.42				.53			5.04
Edinburg	do						1.03	.36	1.61	.03			.37					.05						.32				1.05	.02			4.84
Enterprise ‖	Chickasawhay						1.00	.40	1.10	.70			.14	.20					.62						.19				1.44			5.79
Fulton ‖	Tombigbee						.86		T.	.48				.81					.35					T.	.87				.81			4.18
Hattiesburg ‖	Leaf						.46	.22	T.	1.18			.24	.74					.20						.18				1.16			4.38
Hazlehurst ‖	Pearl						.30	.07	1.83	.32	.03								.30						.60				.65			4.10
Hickory ‖	Chickasawhay						.90	.20	1.89				.50					1.16						.44				1.70				6.79
Jackson	Pearl						.56		1.67	.70	.01		.49						.16					.13	.30				.48			4.50
Lake ‖	do						.40		1.52	.52			.10						.20						.20				.94			3.88
Laurel	Leaf				T.		1.00	.15	2.25	.03	T.		.70			T.		.06	.10					.27	T.			1.10				5.66
Leakesville ‖	Chickasawhay						.10			1.51		.20							.16						.75				1.83			4.55
Louisville	Pearl						.52	.22	1.73				.58					.53						.15				.82				4.55
McNeill	do						.17		.63				.13						.24					.61				1.60				3.38
Macon ‖	Tombigbee						.60		1.35	.60			1.08						.50						.25				1.03			5.41
Magnolia	Pearl						.22	.11	1.04	.03		.03	.30					.25						1.38				1.12	.03			4.51
Meridian	Chickasawhay						.84	.45	1.32	T.	.01		.83					.83						.24				1.30				5.82
Merrill ‖	Pascagoula						.10	.20		1.50		.20							.10						.40				2.00			4.50
Monticello	Pearl			.01			.20	1.09	1.73	.02	.03	.04	.53	.02				.15						.95	.03			.92	.03			5.75
Okolona ‖	Tombigbee						1.00		.38	.41			.62						.62						.62				.63			4.28
Pearlington	Pearl				T.		.46		.08				.22					T.						.62				1.83				3.81
Porterville	Tombigbee						1.08	.09	2.52	T.		T.	.72					.25						.42				1.25	.42			6.75
Shubuta ‖	Chickasawhay						.32	.08	1.64	.66			.36	.04					.48						.44				1.18			5.80
Tupelo	Tombigbee					.52	.63		.20		.12	.25						T.											.49			2.21
Waynesboro ‖	Chickasawhay						.30	1.80	1.15	.56			.20						.60						.40				1.40			6.41
Woodland	Tombigbee						.61		1.10				.85					.67						.41				.85	.60			5.09

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it was measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1911. District No. 2, South Atlantic and east Gulf States.*

Date.	Virginia.								North Carolina.																Charleston, S. C.	
	Hot Springs.		Lynchburg.		Norfolk.		Richmond.		Charlotte.		Edenton.		Fayetteville.		Hatteras.		Newbern. §§		Raleigh.		Roxboro.		Salisbury.		Wilmington.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	59	44	63	48	65	53	61	52	69	52	70	57	75	57	71	60	73	53	69	52	63	49	62	54	71	59	70	61
2....	46	26	48	32	58	40	54	33	55	34	64	45	62	40	64	46	63	46	55	35	62	39	62	34	64	40	68	45
3....	45	14	46	23	46	37	47	29	45	29	49	32	50	29	53	46	61	31	46	30	43	25	62	33	52	35	55	40
4....	47	23	48	27	60	40	49	28	47	36	59	44	53	37	60	50	66	38	50	35	43	25	49	27	61	42	61	47
5....	56	36	55	43	57	48	56	41	57	40	59	50	62	45	65	56	66	48	51	43	50	30	56	40	65	49	72	51
6....	51	41	52	47	66	52	61	47	59	50	69	59	64	50	71	57	75	47	64	49	56	35	56	49	71	53	71	59
7....	58	37	66	46	66	58	69	49	68	53	69	56	75	59	68	61	78	52	68	55	53	43	70	53	72	58	78	66
8....	53	29	54	40	58	47	53	37	56	44	69	49	59	46	62	57	67	46	57	45	65	45	61	44	63	51	66	59
9....	46	37	47	43	55	48	48	45	50	43	58	46	53	45	67	56	57	44	50	45	52	45	50	43	61	50	71	55
10....	64	40	69	45	60	49	63	45	61	48	60	50	64	43	60	52	73	46	66	47	46	44	52	45	60	50	66	53
11....	65	35	67	41	69	44	68	40	59	45	69	42	64	39	67	54	77	40	68	43	65	45	68	45	70	47	65	50
12....	65	28	69	30	74	42	72	34	71	32	72	50	74	51	72	54	78	52	75	35	67	47	70	37	78	52	79	46
13....	32	9	36	22	42	30	37	26	41	25	50	30	70	23	54	37	52	31	39	27	66	22	42	23	52	33	68	57
14....	34	16	37	27	54	33	39	26	37	27	52	28	57	27	66	40	61	27	43	27	35	23	40	25	67	33	62	59
15....	50	29	60	33	58	40	59	34	63	34	60	43	65	38	67	52	64	33	61	37	40	29	62	33	66	46	66	49
16....	47	28	55	34	51	42	52	33	67	43	63	45	68	39	60	48	66	42	60	42	60	35	70	43	68	47	71	48
17....	45	22	46	29	59	38	57	29	65	37	60	34	66	35	66	47	69	37	63	36	65	36	68	33	68	43	73	55
18....	55	31	56	42	70	47	65	43	65	43	69	53	70	52	71	56	70	33	68	46	66	34	66	41	70	51	69	54
19....	45	31	49	34	57	42	54	34	56	38	63	41	64	36	62	49	74	43	57	37	67	35	53	34	66	41	68	47
20....	50	22	64	30	66	37	64	29	66	38	68	34	70	31	65	46	71	33	67	35	63	25	67	30	69	40	70	47
21....	47	21	48	34	56	38	51	34	51	33	59	40	60	38	61	41	77	31	54	34	45	26	56	37	56	36	59	43
22....	40	14	46	28	45	34	46	28	46	28	49	31	51	25	51	39	58	40	48	29	53	27	54	29	50	30	52	37
23....	47	19	53	25	60	44	57	26	52	31	63	28	67	28	65	42	73	26	62	31	55	27	56	24	68	38	63	46
24....	47	24	48	33	65	38	52	36	49	28	72	58	64	36	70	42	71	46	60	33	54	29	49	32	70	35	66	37
25....	35	19	45	29	44	34	44	30	47	25	53	32	54	26	49	37	61	24	48	30	63	25	49	24	50	29	50	30
26....	48	24	59	31	56	33	55	31	57	29	61	35	61	25	55	44	72	24	58	32	64	29	60	24	61	36	61	40
27....	49	20	57	28	61	38	57	31	64	34	62	31	67	28	62	42	74	26	61	36	63	24	62	27	63	38	63	41
28....	50	38	51	40	68	49	62	42	58	47	55	41	68	50	69	55	68	40	66	48	66	36	65	29	69	56	69	57
29....	47	20	51	29	61	38	53	33	47	28	66	43	64	40	65	44	52	46	57	31	44	21	64	26	63	41	57	38
30....	33	13	42	29	42	34	45	30	42	25	47	30	47	26	44	40	68	25	42	26	40	25	62	24	43	31	43	29
Mns..	48.5	26.3	52.9	34.1	58.3	41.2	54.9	35.2	55.7	36.6	61.3	41.9	62.9	38.1	62.7	48.3	67.8	38.3	57.8	37.7	55.8	33.7	58.8	34.7	63.7	43.0	64.4	47.1

Date.	South Carolina.														Georgia.													
	Columbia.		Conway. §§		Ferguson. §§		Georgetown.		Greenville. §§		Newberry.		Society Hill.		Albany. §§		Atlanta.		Augusta.		Dahlonega.		Macon.		Rome. §§		Savannah.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	75	56	77	61	74	58	74	56	77	48	75	54	71	49	69	62	62	52	77	58	65	50	72	52	65	54	75	60
2....	61	40	69	51	63	52	64	52	61	48	62	50	60	31	68	49	51	38	64	42	56	43	63	46	49	40	70	48
3....	50	33	61	35	58	34	62	35	48	30	50	32	49	40	54	40	46	34	50	36	44	30	49	38	50	32	53	39
4....	52	42	62	44	64	30	62	44	50	31	48	40	53	44	59	40	50	30	49	45	44	36	53	45	48	33	60	47
5....	59	45	76	50	67	44	72	58	56	40	54	43	63	51	71	46	61	42	62	48	52	43	66	46	57	43	72	49
6....	66	50	69	57	70	53	66	52	57	50	64	53	66	55	76	50	64	51	68	54	54	47	68	55	68	48	70	58
7....	69	61	74	61	73	59	78	63	66	50	71	57	70	52	79	64	65	57	69	62	63	50	71	57	65	51	79	64
8....	61	48	65	57	60	58	66	57	51	49	62	48	57	46	77	59	57	45	62	51	58	44	58	54	52	50	65	60
9....	54	47	67	52	62	49	76	58	54	43	52	45	54	40	75	63	52	44	59	49	52	44	58	50	56	47	72	58
10....	57	50	62	52	63	50	71	53	58	49	58	50	57	41	73	61	60	50	62	53	65	49	63	55	68	49	67	55
11....	63	53	75	43	77	53	70	53	67	50	64	53	63	53	80	58	69	55	66	58	60	51	67	60	70	53	70	61
12....	77	39	83	52	49	49	82	53	70	53	77	47	75	29	63	63	69	25	78	37	65	33	75	34	46	45	80	44
13....	44	29	51	33	44	35	64	48	47	26	48	27	42	29	50	30	44	21	47	31	44	19	47	28	43	22	53	35
14....	44	31	67	34	54	31	62	48	39	28	40	30	48	37	63	31	41	31	45	34	41	28	44	36	52	22	58	38
15....	65	39	65	46	61	40	71	43	70	32	66	35	62	42	74	45	64	38	68	40	62	35	68	43	70	35	70	49
16....	71	46	77	42	68	37	62	43	74	34	72	48	66	39	76	40	73	49	73	40	69	36	74	37	74	32	74	51
17....	71	43	73	44	65	43	76	63	69	35	67	40	69	59	82	50	64	49	74	49	65	46	73	50	69	35	73	56
18....	69	46	67	62	64	51	63	58	62	41	67	51	66	39	67	56	58	42	69	48	55	40	69	43	66	45	71	54
19....	64	41	70	35	65	41	76	38	63	32	63	36	61	39	72	37	59	42	65	42	56	34	66	37	66	35	69	47
20....	71	39	75	45	72	51	67	43	69	31	70	34	67	42	76	39	67	48	72	37	65	32	72	40	71	35	72	48
21....	56	36	68	43	55	45	61	46	56	31	60	36	50	28	64	43	49	37	57	41	58	35	56	35	53	36	59	43
22....	49	31	61	28	52	32	65	43	49	25	48	28	47	30	65	35	47	33	51	33	44	27	54	34	53	29	55	36
23....	57	35	73	34	60	33	66	35	47	24	56	31	59	46	76	44	52	35	62	40	47	30	66	41	53	32	65	44
24....	59	29	70	46	61	38	69	49	51	32	56	34	60	25	63	43	47	27	60	31	43	26	59	30	34	34	63	35
25....	53	26	66	30	52	26	52	28	52	20	51	23	49	27	65	28	47	23	53	27	49	20	56	27	50	25	49	30
26....	64	33	65	38	65	30	62	36	63	22	62	27	55	28	65	29	57	33	65	34	58	29	64	34	60	24	64	40
27....	66	34	71	35	69	28	67	32	63	22	65	28	62	49	66	34	56	44	66	32	56	29	63	31	59	28	68	47
28....	67	47	70	52	70	30	67	42	57	28	63	46	62	43	60	44	57	32	66	46	52	42	61	40	55	28	72	52
29....	47	32	45	44	45	40	61	32	44	35	53	34	47	26	42	37	33	25	46	30	42	25	40	30	33	27	52	36
30....	43	25	46	29	44	25	51	29	46	19	43	29	42	27	38	25	37	21	43	27	41	19	42	27	42	24	43	28
Mns..	60.1	40.3	67.3	44.5	61.5	41.7	66.8	46.3	57.9	35.3	59.7	39.1	58.4	39.8	66.9	44.8	55.3	38.8	61.6	41.8	54.2	35.7	61.2	41.2	56.6	36.4	65.4	47.1

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1911. District No. 2*—Continued.

Date.	Georgia.						Florida.																			
	Thomasville.		Waycross. §§		West Point. §§		Avon Park.		Fort Myers.		Gainesville. §§		Jacksonville.		Key West.		Miami.		Orange City.		Orlando.		Pensacola.		Tallahassee.§§		Tampa.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	66	55	71	59	66	57	80	71	78	72	71	63	71	62	84	79	87	79	75	66	79	69	73	56	68	59	77	67
2....	69	50	73	55	56	46	81	69	77	71	76	58	70	61	82	76	84	73	81	66	83	68	65	49	70	51	82	66
3....	59	43	60	41	48	37	75	67	78	70	59	51	63	52	82	76	80	74	71	66	79	68	58	46	60	45	73	63
4....	60	49	61	42	55	38	79	68	82	69	78	50	64	55	85	74	79	73	79	63	81	67	67	46	64	47	79	66
5....	75	52	78	50	69	43	81	69	82	71	78	57	71	58	84	76	85	74	80	68	80	68	72	53	73	52	80	67
6....	78	62	78	52	70	45	89	68	83	71	82	62	80	65	86	77	86	75	86	63	86	67	77	71	77	58	83	69
7....	84	66	85	64	69	58	88	66	84	71	81	68	85	70	85	76	87	73	90	66	88	67	80	67	81	63	84	72
8....	74	63	74	60	55	50	90	67	84	72	83	70	81	68	85	76	86	72	91	69	88	68	75	65	78	63	84	71
9....	83	65	82	60	57	50	92	71	83	72	82	71	82	72	86	77	86	73	92	66	90	73	68	56	81	63	84	74
10....	79	63	75	61	62	50	90	66	85	70	84	71	74	68	84	78	84	71	93	65	88	65	76	61	78	63	86	67
11....	74	66	80	62	70	55	87	72	85	71	85	68	81	66	84	78	86	78	91	69	84	73	79	68	78	65	85	71
12....	82	40	85	63	70	61	91	65	85	70	85	69	84	51	86	76	87	74	91	63	86	64	77	36	81	66	83	68
13....	52	32	56	32	45	25	81	58	72	66	59	40	60	37	81	72	82	72	74	51	80	54	52	30	52	32	68	55
14....	54	47	65	36	50	27	90	63	86	65	81	43	71	52	84	75	86	75	78	64	84	61	64	42	56	34	85	62
15....	75	48	77	45	68	39	86	66	81	65	76	59	75	58	83	78	87	73	75	61	79	70	73	60	73	48	79	64
16....	75	42	77	40	71	34	82	64	80	68	75	51	71	53	84	76	83	71	81	55	80	60	66	55	71	51	79	60
17....	79	55	81	49	72	39	90	62	83	70	85	51	80	66	84	73	86	76	89	60	87	65	73	58	77	55	84	69
18....	74	42	72	60	60	45	90	70	84	71	76	66	75	60	84	76	85	72	87	64	87	67	67	53	68	56	83	64
19....	72	40	74	46	65	35	75	55	74	57	71	54	70	54	84	68	83	71	65	51	69	56	70	51	70	45	64	55
20....	74	40	77	40	72	35	72	60	73	58	75	44	71	50	75	69	78	70	75	55	74	59	73	52	71	47	67	58
21....	65	38	68	43	56	39	75	59	75	63	70	53	66	50	75	71	76	69	76	54	77	57	68	51	64	49	75	54
22....	61	33	70	36	55	31	75	58	75	56	68	43	63	48	75	70	74	70	70	45	75	50	69	48	62	38	74	51
23....	75	46	74	38	65	34	79	59	80	62	78	43	75	52	78	70	77	70	78	52	78	56	70	55	71	46	76	55
24....	59	32	62	49	42	38	83	64	79	63	73	55	69	37	79	73	83	67	81	58	70	63	69	37	62	50	78	48
25....	52	27	55	27	53	24	73	42	78	58	54	29	50	31	74	67	74	56	61	36	70	39	65	32	53	28	60	39
26....	64	35	62	31	60	27	65	54	70	55	60	33	58	45	76	68	75	60	63	48	63	51	61	43	61	43	60	51
27....	70	34	74	30	61	30	82	58	78	57	73	43	73	44	80	71	79	73	77	46	79	52	69	49	70	42	77	57
28....	67	43	71	38	54	34	78	60	81	66	72	56	72	56	83	75	81	74	72	65	75	68	74	41	65	45	72	62
29....	43	29	47	39	38	29	70	44	75	49	48	42	56	39	76	62	75	51	66	54	68	48	62	29	42	37	62	45
30....	44	25	46	27	40	25	52	39	54	44	48	29	46	29	62	54	57	45	54	34	50	36	47	25	43	25	50	39
Mns..	67.9	45.4	70.3	45.8	59.1	39.3	80.7	61.8	78.8	64.8	72.9	53.1	70.2	53.6	81.0	72.9	81.3	70.2	78.1	58.1	78.6	61.0	67.1	49.5	67.3	48.9	75.8	60.2

Date.	Alabama.																Mississippi.							
	Anniston.		Bermuda.		Birmingham.		Eufaula.§§		Mobile.		Montgomery.		Tuscaloosa.§§		Uniontown.		Columbus.§§		Hattiesburg.§§		Jackson.		Meridian.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	64	49	75	57	64	47	68	57	71	57	66	52	65	49	74	38	65	42	7	56	66	41	64	44
2.....	53	36	62	.....	48	35	62	43	63	47	57	41	54	40	64	38	49	36	6	48	55	40	60	38
3.....	48	35	56	39	50	33	50	39	57	43	50	38	54	36	51	39	56	32	5	40	50	35	50	35
4.....	56	42	62	42	58	42	59	41	64	46	58	45	63	37	60	44	65	33	[illegible]	40	72	39	63	42
5.....	69	41	77	48	70	43	69	45	69	50	73	47	73	44	74	59	78	40	[illegible]	45	76	47	72	46
6.....	75	55	82	60	78	60	71	55	79	65	78	61	84	51	84	63	84	44	[illegible]	56	87	68	82	69
7.....	65	50	76	63	62	54	72	60	78	64	71	55	60	52	78	58	61	52	[illegible]	60	68	56	64	52
8.....	55	51	70	57	54	51	69	52	76	59	57	53	57	51	64	53	60	52	[illegible]	55	58	53	55	51
9.....	58	50	74	54	59	52	63	53	67	56	64	56	60	52	61	54	63	53	[illegible]	55	64	54	61	52
10.....	67	54	71	52	70	56	67	53	80	60	69	55	72	52	71	49	74	54	[illegible]	56	78	55	69	50
11.....	72	56	80	63	75	59	72	56	80	71	71	57	78	55	80	60	81	56	[illegible]	57	85	68	83	68
12.....	72	28	75	38	72	26	73	60	75	36	72	32	54	38	80	37	41	35	[illegible]	42	77	36	75	30
13.....	42	22	47	27	41	22	47	25	50	31	46	27	43	24	45	25	42	22	[illegible]	26	47	24	42	25
14.....	58	33	68	27	60	34	56	32	66	35	61	35	62	24	64	28	62	23	[illegible]	32	68	28	62	28
15.....	68	39	73	50	69	49	68	42	76	57	72	51	69	36	75	37	73	28	[illegible]	34	78	54	71	44
16.....	74	35	77	38	74	40	68	35	73	51	74	42	73	37	76	36	74	35	[illegible]	38	78	38	73	39
17.....	75	55	80	42	74	51	76	40	76	57	78	50	75	37	76	42	76	35	[illegible]	55	83	56	77	50
18.....	60	38	64	45	59	38	60	48	66	49	61	45	67	40	80	42	64	33	[illegible]	54	69	36	63	40
19.....	65	41	72	.....	65	43	66	33	72	46	70	43	67	35	70	44	70	34	[illegible]	33	77	33	70	41
20.....	70	41	75	32	71	48	69	34	73	46	70	40	70	36	78	41	76	41	[illegible]	34	78	35	71	40
21.....	55	32	66	40	56	37	60	38	68	48	61	43	58	35	69	44	60	38	[illegible]	35	67	41	60	37
22.....	56	31	65	31	58	33	56	31	67	47	59	35	62	34	62	32	61	34	[illegible]	33	69	37	62	35
23.....	60	39	69	41	60	43	67	38	72	56	69	43	58	34	61	47	52	36	[illegible]	37	70	52	57	48
24.....	51	26	49	38	49	26	53	45	62	38	56	30	42	35	62	37	42	32	[illegible]	35	58	30	50	32
25.....	49	22	53	27	50	23	56	24	55	33	56	28	51	24	59	23	54	22	[illegible]	42	58	24	52	27
26.....	60	23	64	30	61	31	58	25	62	39	62	37	58	24	65	32	63	22	[illegible]	45	69	25	62	29
27.....	60	28	65	32	57	44	59	29	67	44	59	36	58	26	59	33	54	28	[illegible]	46	54	36	54	37
28.....	56	33	64	4	55	31	58	40	63	40	56	37	46	35	60	39	41	40	[illegible]	40	54	34	53	30
29.....	33	24	42	29	33	23	39	31	40	31	39	28	35	26	41	25	34	25	[illegible]	26	36	23	34	23
30.....	41	23	45	22	41	22	39	21	47	26	43	25	42	20	45	20	48	18	[illegible]	22	52	18	45	20
Means.....	59.6	37.7	66.9	41.6[b]	59.8	39.9	61.7	40.8	67.1	47.6	62.6	42.3	60.3	37.3	66.3	40.6	60.8	35.8	[illegible]	42.6	66.8	40.5	61.5	39.8

[illegible] Virginia on the 19th, 21st, 24th, 25th, and the 28th to 30th. Snow flurries occurred in the northern portion of Alabama and Georgia on the 24th, 25th, and 26th, and during the following 5 or 6 days the temperature

The total snowfall of the month ranged from a trace in

[illegible] and during the month cold waves occurred over the district, while at [illegible] quite a few stations temperatures as low as 10° were reached. There was a general change to warmer on the 6th, and during the following 5 or 6 days the temperature

[illegible] Carolina

[illegible] Georgia

[illegible] Florida

[illegible] Alabama

[illegible] Mississippi

[illegible] Louisiana

[illegible] Arkansas

[illegible] Tennessee

[illegible] Kentucky

[illegible] Ohio

[illegible] Indiana

[illegible] Illinois

[illegible] Missouri

[illegible] Kansas

[illegible] Oklahoma

[illegible] Texas

[illegible] New Mexico

[illegible] Arizona

[illegible] California

[illegible] Nevada

[illegible] Utah

[illegible] Colorado

[illegible] Wyoming

[illegible] Montana

[illegible] Idaho

[illegible] Oregon

[illegible] Washington

[illegible] North Dakota

[illegible] South Dakota

[illegible] Nebraska

[illegible] Iowa

[illegible] Minnesota

[illegible] Wisconsin

[illegible] Michigan

[illegible] New York

[illegible] Pennsylvania

[illegible] New Jersey

[illegible] Delaware

[illegible] Maryland

[illegible] District of Columbia

[illegible] West Virginia

[illegible] Virginia

[illegible] North Carolina

[illegible] South

CLIMATOLOGICAL DATA FOR NOVEMBER, 1911.

DISTRICT NO. 3, OHIO VALLEY.

Prof. FERDINAND J. WALZ, District Editor.

GENERAL SUMMARY.

The weather during November, 1911, was remarkably cold, cloudy, wet, and windy, and there was a marked deficiency in sunshine. Precipitation either as rain or snow, or both, was frequent, although the aggregate amount was not excessive in any section of the district. The distribution was quite uniform over the district and through the month. Snowfall was unusually frequent, and was considerable in amount for this month over the mountain sections of the district and over the States north of the Ohio River. The month as a whole was rather unfavorable for outdoor work. The gathering of corn was delayed in northern sections by wet fields and by the frequent rain and snow; also there was considerable damage to sugar beets and late potatoes in the ground by freezing in the early part of the month.

Three or four general storms with steep gradients of pressure passed over the district during the month, causing stress of weather and marked changes in temperature. The most noteworthy event of the month, however, was the intense cold wave and high wind which swept over the entire district on the 11th–12th, when the temperature fell 50° or more in a few hours and winds of destructive force were experienced in practically all parts of the district. In the western portions of Tennessee and Kentucky and over the greater portions of Illinois and Indiana the losses by the winds and the storms at this time were especially heavy, amounting to many hundred thousands of dollars.

TEMPERATURE.

The temperature averaged from 2.4° to 5.5° below the normal for November for the States or parts of States comprising the district, the lesser departures occurring, as a rule, in the State of Ohio and the greater in the lower Ohio Valley proper, although deficiencies about as great occurred at numerous places from the upper Wabash Valley in the north to the Tennessee Valley of Alabama in the south. The warmest weather occurred about the 11th, when maximum temperatures for the various States of the district ranged from 67° in western New York to 85° in Kentucky, the latter being registered at Hopkinsville, Ky., on the 11th. The coldest day was the 13th, when minimum temperatures for the various States ranged from 5° to 13°, the lowest being 5° at Burke's Garden, Va.

The month began unusually cold, and during the first 4 days the daily mean temperature ranged from 4° to 20° below normal, and minimum temperatures registered from 5° to 20° below freezing in all parts of the district, while at quite a few stations a temperature as low as 10° was reached. There was a marked change to warmer on the 6th, and during the following 5 or 6 days the temperature was mostly above normal. On the 10th and 11th the temperature was remarkably high, being from 10° to 20° above the normal for the season. During the afternoon of the 11th and the night of the 11th–12th a severe cold wave attended by high winds swept over the district, causing a fall in temperature of 50° and over in a few hours and a fall of 60° to 70° by the morning of the 13th. There was a gradual warming up in the period 15th–17th, and on the 17th temperatures were generally above normal, but there was a quick reaction to colder on the 18th and during the remainder of the month the temperature was below normal every day in amounts ranging from 2° to 24°, except on the 26th and 27th, when it was slightly above normal over all except the southeastern portion. The last two days of the month were notably cold, although not so severe as during the period 12th–14th.

PRECIPITATION.

The precipitation was slightly below normal over most of the northeastern portion of the district and over Illinois. It was above normal over the remainder of the district, although at only a few scattered places did the excess amount to as much as 1 inch. The amounts at the various stations ranged between 2 and 4 inches, except that amounts ranging between 4 and 6 inches were received at most stations in Kentucky and Tennessee and at a few stations in southern Indiana. Precipitation was unusually well distributed through the month. In some sections, notably western Pennsylvania, western New York, West Virginia, and Kentucky, precipitation occurred nearly every day, yet, in the main, precipitation occurred in five well-defined periods, viz, 5th–7th, 11th–13th, 17th–18th, 23d–24th, and 28th–29th. Quite heavy precipitation occurred generally on the 6th, 12th, 17th, and 18th. In addition to the above periods, general and quite heavy rains occurred over the southern and southeastern portions of the district on the 8th–9th and over much of Kentucky on the 4th.

Considerable snow fell over western New York, western Pennsylvania, Ohio, and Indiana, during one or more of the first 3 days of the month; snow flurries occurred in Indiana and Kentucky on the 8th and 9th; snowfall ranging in amount from a trace to 3 inches daily occurred over the central, northern, and eastern sections of the district in the period 12th–15th, and in varying amounts over sections north of Tennessee on the 16th–19th and during the last decade of the month, except on the 26th and 27th. Snow fell in the mountain sections of southwestern Virginia on the 12th, 13th, and 14th, and in the mountain sections of North Carolina and Virginia on the 19th, 21st, 24th, 25th, and the 28th to 30th. Snow flurries occurred in the northern portion of Alabama and Georgia on the 24th, 29th, and 30th. The total snowfall of the month ranged from a trace in

the lower basin of the Tennessee and Cumberland Rivers to from 3 to 11.5 inches over the watersheds of the upper Ohio River and the headwater tributaries.

Sleet storms caused considerable delay to traffic in Kentucky and bordering States on the 12th, 14th, and 23d. Thunderstorms occurred on the 1st in Illinois; on the 4th in Tennessee; on the 6th in Illinois, Indiana, Ohio, Kentucky, West Virginia, and Tennessee; on the 7th and 9th in Illinois; on the 10th and 11th in Illinois, Indiana, Ohio, Kentucky, and West Virginia; on the 12th in Kentucky and Tennessee; on the 18th in Tennessee, and on the 17th and 20th in Illinois. Several of these storms were attended by destructive winds, causing large damage over considerable areas.

DESTRUCTIVE STORM AND COLD WAVE OF THE 11TH–12TH.

This storm developed over the central Rocky Mountain region during the 10th and swept over the Central States during the 11th–12th. The path of the storm center extended eastward from Colorado to northwestern Missouri, thence northeastward across the upper Mississippi Valley and northern Lake Michigan to Ontario. A long and rather narrow but deep trough of low pressure extended southward to the Gulf States. The temperature gradient attending the disturbance was remarkably steep, as instanced by the fact that at 8 p. m., seventy-fifth meridian time, of the 11th, the temperature in the lower Ohio Valley registered from 72° to 76°, while at St. Louis it was 48°, at Kansas City 16°, and Dodge City, Kans., 12°. At Little Rock, Ark., it was 78°, and at Fort Smith, only about 150 miles to the westward and in the same State, it was 34°.

High winds attended the storm throughout its passage, continuing generally for many hours, while maximum velocities of from 50 to 70 miles per hour were reached at many places. Thunderstorms and severe wind squalls immediately preceded the break in temperature and resulted in much destruction to property in many sections, but especially in the region lying nearer the track of the center of the main storm. The rapid fall in temperature which immediately followed the passage of the storm trough soon changed the rain into sleet and snow. Brief summaries of some of the damage in this district follow:

Tennessee.—In Nashville and vicinity the estimated damage to property is placed at between $50,000 and $60,000. At Forest Grove, about 15 miles north of Nashville, a schoolhouse, 10 residences, and 14 barns were wrecked. Three persons were seriously injured and several head of stock were crippled, and over 70,000 pounds of tobacco materially damaged. At Mackenzie a handsome new residence which had only been completed and occupied a week was completely demolished, the occupants barely escaping with their lives; also a large roller mill, the city water tank, and a number of business houses were unroofed and a large amount of timber and many telegraph and telephone poles were blown down. At Union City on a farm belonging to Henry Garrigan the storm blew down the residence and barn. At Hygeia Springs a hotel was unroofed, 2 residences were blown down, and a large tobacco barn was struck by lightning and burned, together with a large crop of tobacco. A large number of forest and shade trees were uprooted, and some were twisted off near the ground. The damage to property in this section is estimated at from $15,000 to $20,000. At Lawrenceburg, Camden, Lebanon, and various other places the reports say that thousands of dollars damage was done by this storm. At Ducktown the lightning struck a house, and Miss Mary Long was instantly killed and another young lady and a baby seriously injured.

Kentucky.—Property damage throughout the State, especially in the western portion, was great, and the loss will probably run up into the hundreds of thousands of dollars. Houses and barns were unroofed, trees blown down, and the telephone and telegraph wires put out of commission. Louisville was cut off from communication with many of the larger cities of the State for several hours. The severe cold wave which so closely followed the storm caused great suffering.

Illinois.—Many small buildings, barns, windmills, etc., were either blown down or damaged by the storm. Telephone, telegraph, and railroad service was greatly hindered. The loss in many localities amounted to from $5,000 to $10,000.

Indiana.—The windstorm on the evening of the 11th caused extensive damage in many places, and the damaged areas were not confined to any particular portion of the State. The most important damage was about as follows: Bedford, about 15 stone mills were more or less damaged, 2 being completely wrecked. Many other buildings were unroofed or otherwise damaged, telephone and telegraph lines were blown down, and many smokestacks were leveled to the ground. The estimated loss in this vicinity is about $200,000. Lafayette, the electric-light wires were broken by the wind and the city was in darkness for quite a while. A lady who was attending the theater at the time the storm broke was so badly frightened that she died suddenly on the street on her way home. Two garages were wrecked and the roofs of many stores were blown off. Considerable damage was done at the experiment station located at Purdue University. Heavy losses were reported from Shelby County, where houses and barns were demolished, orchards ruined, and live stock killed, besides much suffering was caused by the snow and cold which followed the storm. The Lutheran Church at Waldron and several houses were badly damaged. At Shoals the loss was estimated at $25,000, including damage to a mill, store, church, high school, courthouse, and the bridge across White River. A dwelling house and barn also were demolished and 10 cows which were in the latter were killed. At Terre Haute 6 persons were injured. One was caught in the débris of his house, which was demolished; 2 were injured while in a caboose which was blown from the railroad track and fell down an embankment, and 3 were occupants of a buggy which was wrecked. Several houses northeast of the city were destroyed and a school building badly damaged. Many buildings were destroyed or partly wrecked at other places throughout the State, and considerable damage to shipping was reported from points along the Ohio River.

TABLE 1.—*Climatological data for November, 1911. District No. 3, Ohio Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New York.																				
Allegany	Cattaraugus	1,441	5	35.0	.....	67	11	13	13	41	3.28	.....	0.90	9.4	18	3	10	17	nw.	Charles E. Whitney.
Bolivar	Allegany	1,800	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. O. Newton.
Olean	Cattaraugus	.....	3	.....	.....	.....	.....	.....	.....	.....	2.84	.....	0.70	2.8	18	7	8	15	w.	John W. Allen.
Pennsylvania.																				
Aleppo	Greene	1,135	10	38.3	− 2.8	69	11†	10	13	49	2.88	+ 0.99	0.65	2.0	9	4	7	19	nw.	J. S. Hinerman.
Baldwin	Butler	1,404	5	37.0[x]	.....	60	11†	9	13	42	3.45	.....	0.60	10.8	12	1[x]	2[x]	20[x]	w.	S. H. Templeton.
Beaver Dam	Beaver	674	17	.....	.....	.....	.....	.....	.....	.....	2.49	− 0.21	0.89	.....	15	3	1	26	sw.	U. S. Engineer.
Brookville	Jefferson	1,173	0	35.0	.....	64	11	10	13†	37	2.15	− 1.07	0.55	2.1	10	.....	.....	.....	w.	H. C. Bartholomew.
Clarion	Clarion	1,078	26	.....	.....	.....	.....	.....	.....	.....	3.18	+ 0.44	0.95	.....	13	2	0	28	w.	J. A. Miller.
Claysville	Washington	1,127	7	38.6	.....	70	12	11	13	50	2.57	.....	0.68	6.5	10	7	12	11	w.	E. T. Buchanan.
Confluence	Somerset	1,352	27	.....	.....	.....	.....	.....	.....	.....	2.08	− 1.09	0.68	0.5	9	1	6	23	ne.	Grant Pyle.
Franklin	Venango	955	37	35.8	− 3.9	73	1	13	13	43	3.65	− 0.42	0.85	7.0	19	4	3	23	w.	F. E. Dixon.
Freeport	Armstrong	772	38	.....	.....	.....	.....	.....	.....	.....	2.91	− 0.22	0.75	4.1	16	3	2	25	.....	Mrs. Anna R. Burtner.
Greensboro	Greene	768	22	.....	.....	.....	.....	.....	.....	.....	2.30	− 0.55	0.48	T.	13	3	4	23	sw.	James G. Cramer.
Greenville	Mercer	950	15	36.0	− 2.4	72	11	13	13	48	3.11	+ 0.30	0.65	13.0	10	9	4	17	nw.	A. M. Orr.
Indiana	Indiana	1,350	14	37.5	− 3.6	68	11	11	13	44	3.25	+ 0.39	0.65	2.5	12	7	8	15	w.	R. W. Wehrle.
Johnstown	Cambria	1,184	23	38.9	− 2.7	66	11	13	13	44	3.12	− 0.08	0.92	3.2	16	4	12	14	nw.	E. C. Lorentz.
Lock No. 4	Washington	718	25	.....	.....	.....	.....	.....	.....	.....	2.61	− 0.08	0.61	1.8	12	3	9	18	s.	R. T. McGowan.
Lycippus	Westmoreland	1,420	19	38.1	− 3.9	70	11	11	13	49	2.89	+ 0.35	0.68	3.5	10	.....	.....	.....	.....	Murray Forbes.
Pittsburgh	Allegheny	842	41	39.3	− 3.6	69	11	13	13	52	2.02	− 0.53	0.58	5.0	11	2	8	20	w.	U. S. Weather Bureau.
Saegerstown	Crawford	1,116	20	35.8	− 2.8	68	12	10	22	48	3.24	− 0.21	0.70	14.0	13	0	11	19	sw.	J. G. Apple.
Skidmore	Lawrence	1,000	7	34.4[b]	.....	64	11†	9	14	48	.....	.....	.....	.....	.....	13[b]	0[b]	15[b]	sw.	W. H. Stoner.
Somerset	Somerset	2,250	55	34.8	− 3.8	71	11	7	13	45	2.92	− 0.52	0.85	10.2	10	0	16	14	nw.	W. M. Schrock.
Uniontown	Fayette	999	23	39.6	− 3.6	73	11	14	13	36	3.12	− 0.23	0.68	1.5	9	3	8	19	nw.	Wm. Hunt.
Warren	Warren	1,137	22	35.8	− 3.2	69	26	13	13	34	3.62	+ 0.14	0.60	11.4	17	6	0	24	nw.	Anna Simpson.
Maryland.																				
Deer Park	Garrett	2,457	17	36.0	− 2.0	77	11	6	13	53	2.56	+ 0.08	1.05	6.5	10	.....	.....	.....	.....	S. P. Specht.
Grantsville	do	2,351	17	35.0	− 4.6	69	11	9	13	44	2.48	− 0.08	0.90	6.5	8	6	9	15	w.	J. S. Miller.
Oakland	do	2,461	11	35.6	.....	74	11	8	13	49	2.39	.....	1.23	4.8	12	4	12	14	w.	R. E. Weber.
West Virginia.																				
Bancroft	Putnam	574	10	42.8	.....	83	11	15	13	42	3.97	+ 1.56	0.90	2.8	10	9	0	21	ne.	R. E. Dent.
Beckley	Raleigh	2,440	12	38.6	− 3.9	72	11	14	3†	47	2.32	+ 0.05	1.41	3.0	5	5	7	18	w.	John A. Ewart.
Bens Run	Pleasants	622	10	40.2	− 2.9	70	12	15	13	48	3.32	+ 0.86	0.75	4.0	8	18	5	7	.....	J. D. Riggs.
Bluefield	Mercer	2,563	17	41.6	− 2.8	75	11	10	13	38	2.92	+ 0.49	0.90	.....	6	11	5	14	.....	Norfolk & Western R. R.
Buckhannon	Upshur	1,472	20	39.7	− 1.4	75	11	10	13	49	3.01	− 0.46	1.20	3.0	7	11	7	12	.....	H. A. Darnall.
Cairo	Ritchie	667	10	43.3	− 0.1	70	12	13	3	35	1.76	− 0.83	0.71	4.0	5	0	13	17	w.	Van A. Zevely.
Central Station	Doddridge	900	11	.....	.....	72[x]	11	.....	.....	.....	2.05	− 0.49	.....	.....	.....	.....	.....	.....	.....	G. W. Sherwood.
Charleston	Kanawha	598	24	46.4	.....	79	11	16	13	50	3.94	+ 1.04	1.59	1.5	10	13	5	12	w.	R. C. Hewes.
Creston	Wirt	612	11	40.6	− 3.6	70	11†	15	13	44	3.57	+ 1.38	1.33	1.3	10	9	4	17	w.	J. M. Reed.
Cuba	Jackson	544	10	40.8	− 2.3	73	12	12	3	51	2.98	+ 0.98	0.91	1.0	9	6	16	8	nw.	C. T. Perry.
Elkhorn [4]	McDowell	1,933	19	42.3	− 3.6	75	12	9	14	43	1.54	− 1.13	0.55	1.2	....	14	1	11	w.	J. J. Lincoln.
Elkins	Randolph	1,940	13	38.0	− 1.5	75	11	10	13	52	2.75	− 0.11	1.17	2.5	12	6	7	17	w.	U. S. Weather Bureau.
Fairmont	Marion	879	18	.....	.....	.....	.....	.....	.....	.....	1.89	− 0.93	0.81	T.	10	.....	.....	.....	.....	H. Glenn Fleming.
Glenville	Gilmer	738	22	42.5	− 0.8	78	11	14	13	48	2.92	− 0.11	0.67	1.5	8	7	2	21	sw.	John Holt.
Grafton	Taylor	985	18	42.2	− 0.8	79	11	14	13	51	1.91	− 1.10	0.96	1.0	5	12	8	10	w.	Joseph Gerken.
Green Sulphur Springs	Summer	1,600	16	39.9	− 2.9	73	11	14	3†	40	2.92	+ 0.92	1.41	1.8	11	9	7	14	w.	Arthur George.
Hinton	do	1,400	21	41.0	− 3.9	72	10	15	13†	35	2.96	+ 0.74	0.92	0.5	14	11	3	16	sw.	J. B. Lavender.
Huntington	Cabell	510	17	41.0	− 2.5	68	11	17	13	34	3.34	+ 0.56	1.24	2.0	7	10	4	16	.....	L. H. Hutchinson.
Lewisburg	Greenbrier	2,200	11	39.0	− 2.4	69	11	11	13	42	3.02	+ 0.50	1.56	T.	5	16	8	6	nw.	Geo. T. Argabrite.
Logan	Logan	665	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. A. Deem.
Lost Creek	Harrison	1,033	15	38.8	− 3.5	77	11	11	13	47	2.09	− 0.34	0.71	T.	5	10	4	16	w.	Allen Smith.
Madison	Boone	704	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. E. Bradley.
Mannington	Marion	967	10	40.0	.....	75	11	14	13†	46	2.51	+ 0.30	0.74	1.8	11	8	7	15	w.	Jas. A. Morgan.
Marlinton [b]	Pocohontas	2,169	17	39.1	+ 0.7	69	11†	12	13	53	3.66	+ 0.89	1.73	0.2	9	16	3	9	.....	C. J. McCarty.
Morgantown [a]	Monongalia	1,250	36	40.5	− 2.9	73	11	12	13	50	1.98	− 1.07	0.65	T.	4	14	10	3	w.	Horace Atwood.
Moundsville	Marshall	640	10	40.9	− 1.7	71	12	14	13	48	1.81	+ 0.27	0.68	T.	6	11	4	15	sw.	M. L. Brown.
New Cumberland	Hancock	987	14	39.6	− 1.3	75	10	12	13	52	2.40	+ 0.66	0.80	T.	5	6	4	20	s.	Frank S. Evans.
New Martinsville	Wetzel	634	18	40.8	− 3.6	71	12	11	13	48	3.12	+ 0.51	0.88	T.	6	10	4	16	s.	Wm. Ankron.
Nuttallburg	Fayette	2,252	18	.....	.....	.....	.....	.....	.....	.....	1.99	− 0.55	1.09	3.0	3	11[c]	4[c]	12[c]	.....	Miss Donna Tully.
Parkersburg	Wood	638	24	40.8	− 2.5	72	11	15	13	51	2.91	+ 0.08	0.82	3.4	10	6	6	18	s.	U. S. Weather Bureau.
Parsons	Tucker	1,662	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. W. Swisher.
Philippi	Barbour	1,192	18	40.8	− 0.2	78	11	11	3	51	2.87	− 0.08	0.91	3.9	10	5	12	13	nw.	J. D. Dadisman.
Pickens	Randolph	2,785	20	37.6	− 2.9	73	11	10	22	49	5.54	+ 2.01	1.99	11.0	10	9	6	15	w.	Dr. J. L. Cunningham.
Pineville	Wyoming	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. V. Senter.
Point Pleasant	Mason	553	21	42.0	− 3.1	75	11	15	13	48	3.56	+ 0.73	0.98	1.0	11	7	2	21	se.	W. D. Holmes.
Powelliton [a]	Fayette	904	14	42.9	− 1.6	80	....	15	....	36	3.14	+ 0.69	1.55	1.2	....	7	10	8	.....	Morris Hansford.
Princeton	Mercer	2,469	10	37.3	− 2.7	69	11	10	13	37	5.50	+ 1.89	1.60	4.5	10	8	12	10	w.	H. Scott.
Robertsburg	Putnam	574	11	40.6	− 2.7	74	11	15	13	41	3.59	+ 1.34	1.64	2.5	8	6	3	21	w.	E. P. Turley.
Ryan	Roane	639	9	41.1	.....	79	11	14	13	49	3.54	.....	1.39	4.1	10	7	12	11	.....	Wm. E. Ryan.
Smithfield	Wetzel	919	8	38.4	.....	69	11	13	13	39	2.74	.....	0.75	3.5	13	7	12	11	n.	G. M. Whisler.
Spencer	Roane	710	13	39.8	.....	78	11	14	13	36	1.53	− 0.63	0.90	1.0	5	1	13	16	.....	A. M. McKown.
Sutton	Braxton	839	9	42.0[a]	.....	70	11	11[a]	13†	49[a]	1.93	.....	1.13	2.0	3	22	2	6	.....	J. E. Baughman.
Terra Alta	Preston	3,207	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. F. Dodge.
Union	Monroe	.....	7	37.3	.....	70	12	10	13	35	3.06	.....	1.02	0.5	8	.....	.....	.....	.....	Shelton Clark.
Valley Fork	Clay	.....	9	.....	.....	.....	.....	.....	.....	.....	3.10	.....	1.00	.....	5	13	11	6	.....	Miss Blanche Pierson.
Webster Springs	Webster	1,500	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. H. Hamrick.
Wellsburg	Brooke	1,225	12	37.4	− 3.8	68	12	12	13	49	2.50	+ 0.45	0.67	6.5	10	5	12	13	w.	C. P. Waugh.
Weston	Lewis	824	21	41.4	− 2.1	74	11	14	13	38	2.26	− 1.17	0.98	1.4	11	8[a]	10[a]	11[a]	sw.	Miss C. M. Davis.
Wheeling	Ohio	645	26	39.1	.....	70	11	13	13†	35	2.71	+ 0.25	0.60	2.5	13	8	7	15	w.	Miss M. B. Forsyth.
Williamson	Mingo	660	11	42.3	− 3.5	78	11	11	13	38	3.58	+ 0.69	1.00	1.5	10	12	1	17	w.	J. F. Keyser.
Ohio.																				
Amesville	Athens	630	7	40.4	.....	71	11†	12	13	50	3.17	.....	0.97	2.0	6	11	6	13	nw.	F. W. Gibson.
Bangorville	Richland	1,380	24	36.1	− 3.3	66	12	9	13	50	2.49	− 0.57	0.68	4.5	12	4	12	14	sw.	S. M. Painter.
Bellefontaine	Logan	1,276	32	35.4	− 5.3	65	10†	10	13	50	3.95	+ 1.02	1.06	3.5	11	9	4	17	sw.	Cory L. Lane.
Bladensburg	Knox	1,100	20	35.8[x]	− 3.1	68[x]	11	9[x]	13	32[x]	2.10	− 0.19	0.95	3.3	7	.....	.....	.....	sw.	Miss Mary Elliott.
Cadiz	Harrison	1,245	8	37.5	.....	66	12	10	13	49	2.90	.....	0.70	8.7	13	6	10	14	sw.	Harry B. McConnell.
Cambridge	Guernsey	803	19	38.8	− 0.6	68	12	12	13	49	2.88	+ 0.55	0.91	2.0	5	4	16	10	.....	Samuel Mahaffey.
Camp Dennison	Hamilton	570	18	40.0	− 2.9	71	11	14	13	49	3.12	+ 0.34	1.32	1.1	7	12	7	11	sw.	Henry F. Pinkvoss.
Canal Dover	Tuscarawas	884	18	36.8	− 3.0	68	12	12	13	48	2.87	+ 0.28	0.70	5.0	11	4	14	12	w.	Ed. S. Slingluff.
Canton	Stark	1,089	28	39.6	− 0.3	70	10	13	13	51	2.65	+ 0.02	0.69	6.6	16	8	5	17	sw.	Carl H. Meyer.
Cardington	Morrow	1,010	16	38.2	− 1.2	68	11	15	13	42	.....	.....	.....	.....	.....	.....	.....	.....	nw.	J. W. Shaw.
Chillicothe	Ross	630	8	.....	.....	.....	.....	.....	.....	.....	2.75	.....	0.71	.....	8	.....	.....	.....	.....	Marion Mackey.
Cincinnati	Hamilton	628	40	40.6	− 4.0	71	11	15	13	53	2.92	− 0.29	1.08	0.3	8	7	6	17	w.	U. S. Weather Bureau.
Circleville	Pickaway	694	23	41.0	− 1.4	72	11	15	13	50	2.73	+ 0.09	0.90	0.5	7	11	7	12	s.	Dr. H. R. Clarke.

TABLE 1.—*Climatological data for November, 1911. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Ohio—Continued.																				
Clarington	Monroe	600	8	39.3	.....	70	12	11	13	40	3.06	.....	0.80	0.3	10	6	9	15	sw.	Col. S. Tschapat.
Columbus	Franklin	918	33	38.2	− 3.2	70	12	14	13	54	2.71	− 0.40	1.14	3.0	12	6	8	16	w.	U. S. Weather Bureau.
Coshocton	Coshocton	770	2	.....	.....	.....	.....	.....	.....	.....	3.04	.....	0.65	.....	14	.....	.....	.....	.....	Mrs. Ada Jeffries.
Dayton (1)	Montgomery	899	...	38.0	.....	69	11	13	13	53	2.26	.....	0.61	2.3	11	8	4	18	sw.	U. S. Weather Bureau.
Dayton (2)	....do....	790	30	37.7	− 4.4	69[d]	11†	13	13	51[b]	2.46	− 0.54	0.80	.....	6	.....	.....	.....	.....	Mrs. Edith L. Boyer.
Delaware	Delaware	927	14	37.6	− 2.7	68	11†	13	13	48	2.15	− 0.34	0.70	4.0	12	9	6	15	w.	DeWitt H. Leas.
Demos	Belmont	1,325	23	36.6[a]	− 4.7	68[a]	12	10	13	50[a]	3.58	+ 1.15	0.76	4.5	16	7	10	13	sw.	J. T. Dysart.
Dennison	Tuscarawas	846	1	38.6	.....	69	12	13	13	49	2.43	.....	0.74	5.5	9	9	12	9	w.	Water Supply Co.
Frankfort	Ross	745	19	38.1	− 4.3	64	8†	14	13	39	1.93	− 0.53	0.90	T.	5	10	3	17	w.	O. A. Cory.
Garrettsville	Portage	1,005	27	35.8	− 2.8	68	12	12	13	50	3.48	+ 0.46	0.82	11.5	14	4	7	19	w.	S. M. Luther.
Granville	Licking	900	29	37.5	− 2.5	67	12	12	13	49	3.25	+ 0.08	1.08	4.3	8	12	5	13	sw.	Dr. L. E. Davis.
Gratiot	....do....	1,000	22	38.6	− 2.4	67	11	12	13	47	2.53	− 0.21	0.90	3.1	11	5	15	10	w.	W. B. Longstreth.
Green	Adams	500	18	40.0	− 4.2	66	6	10	13	28	3.08	+ 0.09	2.00	T.	3	5	12	13	w.	W. F. Kenyon.
Green Hill	Columbiana	1,135	17	35.8	− 2.8	68	12	10	13	51	2.44	+ 0.24	0.70	8.6	12	7	9	14	sw.	Jos. E. Bentley.
Greenville	Darke	1,060	25	36.5	− 3.8	68	11†	10	13	54	3.29	+ 0.06	1.01	1.5	9	8	13	9	w.	Geo. A. Katzenberger.
Hamilton	Butler	601	...	.....	.....	.....	.....	.....	.....	.....	3.08	.....	1.15	1.0	7	6	11	12	.....	Earl W. Stout.
Haydenville	Hocking	700	...	39.2	.....	73	11	12	13	50	3.14	.....	0.96	3.2	7	15	2	13	sw.	H. W. Stiers.
Hillsboro	Highland	1,063	32	38.8	− 3.4	70	11	12	13	50	3.69	+ 0.56	1.25	3.0	8	5	10	15	sw.	Carey H. Roush.
Ironton	Lawrence	575	28	42.2	− 1.8	74[a]	11	16[a]	13	46	3.49	+ 0.73	1.37	0.5	10	11	4	15	sw.	James Bull.
Jacksonburg	Butler	975	43	38.8	− 2.6	67	11	11	12	34	2.98	− 0.15	1.05	5.0	6	4	10	16	sw.	Dr. J. B. Owsley.
Kenton	Hardin	1,015	19	35.4	− 4.8	68	12	9	13	53	2.74	− 0.74	1.10	2.0	8	6	9	15	w.	N. S. Martin.
Killbuck	Holmes	1,087	19	37.1	− 2.7	70	11	8	13	49	3.43	+ 0.98	0.90	6.9	13	15	4	11	ne.	Lloyd C. Schonauer.
Lancaster	Fairfield	898	16	39.8	− 2.4	69	11†	14	13	49	2.69	− 0.04	0.81	.....	8	10	2	18	sw.	R. L. Renshaw.
McConnelsville	Morgan	710	27	40.6	− 1.4	70	11†	19	12†	51	3.67	+ 0.83	0.99	4.5	8	7	9	14	w.	C. H. Morris.
Marietta	Washington	627	91	41.2	− 1.5	68	12	14	13	48	3.33	+ 0.34	0.80	2.2	10	8	6	16	s.	Prof. T. D. Biscoe.
Marion	Marion	980	33	37.2	− 3.2	67	10†	10	13	48	3.28	+ 0.66	1.05	4.1	8	2	14	14	sw.	Dr. E. H. Raffensperger.
Milfordton	Knox	1,200	19	36.4	− 2.4	66	10†	12	16	50	1.99	− 0.33	0.79	6.5	9	8	11	11	sw.	L. H. Burgess.
Milligan	Perry	875	18	38.5	− 2.5	79	10	11	3	50	2.84	+ 0.60	0.95	2.0	8	8	12	10	sw.	V. C. Eveland.
Millport	Columbiana	1,145	18	36.1	− 3.0	68	12	10	13	50	2.22	− 0.14	0.70	2.7	14	1	11	18	sw.	G. F. Copeland.
Nellie	Coshocton	850	11	38.2	− 1.9	70	11	19	12	41	2.66	+ 0.10	0.88	1.0	7	7	14	9	sw.	Ethel L. Gamertsfelder.
New Alexandria	Jefferson	1,050	26	38.8	− 2.4	68	7†	9	13	30	2.10	− 0.64	1.00	3.0	7	12	3	15	n.	Mrs. Mary K. Pennell.
New Berlin	Stark	1,100	18	35.8	− 3.5	64	11	9	13	44	2.58	+ 0.27	0.73	4.5	12	10	2	18	w.	Clayton Holl.
New Waterford	Columbiana	1,053	16	36.2	− 3.2	68	12	11	13	51	2.73	0.00	1.00	5.5	7	12	6	12	sw.	Sam C. Scott.
Ohio State University	Franklin	757	28	38.4	− 2.0	71	12	14	13	52	2.41	− 0.29	0.93	.....	9	6	4	20	w.	Prof. H. C. Lord.
Pataskala	Licking	1,015	19	37.2	− 3.3	69	12	12	13	51	3.38	+ 0.43	1.12	4.1	13	3	4	13	w.	J. N. Ridenour.
Peebles	Adams	645	1	40.4	.....	77	10	12	13	51	2.43	.....	1.02	2.0	7	2	7	11	w.	Ora O. Smalley.
Philo	Muskingum	1,018	16	38.5	− 4.5	68	12	11	13	51	2.05	− 0.15	0.72	1.7	8	8	11	11	nw.	L. C. Burckholter.
Piqua	Miami	847	1	.....	.....	.....	.....	.....	.....	.....	4.27	.....	0.95	4.2	12	8	11	21	sw.	Harry L. Roberts.
Plattsburg	Clark	1,130	18	36.7	− 4.4	68	12	11	13	51	2.27	− 0.64	0.81	5.5	7	10	8	12	w.	F. E. Stewart.
Portsmouth	Scioto	527	80	41.7	− 3.0	74	11	15	13	50	3.43	+ 0.47	0.74	.....	10	10	6	14	w.	Dr. H. A. Shirrmann.
Prospect	Marion	909	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Neil J. Gast.
Rittman	Wayne	900	19	37.1	− 2.7	64	12	11	13	34	3.00	+ 0.17	1.02	4.5	11	11	2	17	w.	J. B. Gish.
Shenandoah	Richland	1,100	19	35.8	− 3.0	67	11	10	13	52	2.53	+ 0.19	0.81	6.5	10	2	6	12	s.	T. B. Arnett.
Sidney	Shelby	985	28	37.8	− 2.8	68	11†	10	13	50	3.33	+ 0.08	0.90	3.7	12	8	4	18	s.	Hamline B. Blake.
Somerset	Perry	1,080	12	38.4	− 4.8	67	10†	12	12	49	1.51	− 1.06	0.98	4.5	5	8	2	10	s.	Miss M. W. C. Sheridan.
Springfield	Clark	980	17	.....	.....	.....	.....	.....	.....	.....	2.41	− 0.50	0.75	.....	9	7	15	8	sw.	W. A. Webster.
Summerfield	Noble	1,187	5	38.4	.....	69	12	11	13	50	3.49	.....	0.89	3.0	9	8	10	12	sw.	H. R. McClintock.
Syracuse	Meigs	583	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. G. Campbell.
Thurman	Gallia	696	18	41.6	− 2.4	74	11	13	13	48	2.97	+ 0.43	1.00	T.	5	5	9	16	.....	D. D. Thomas.
Urbana	Champaign	1,031	43	36.6	− 3.4	68	10	10	13	50	2.66	− 0.25	0.94	5.0	10	2	9	9	sw.	Prof. J. H. Williams.
Warren	Trumbull	900	22	36.6[b]	− 3.7	67[b]	12	14[b]	13	44[b]	2.61	+ 0.13	0.53	7.3	13	.....	.....	.....	sw.	M. D. McCorkle.
Waverly	Pike	590	28	40.3	− 2.5	73	11	13	13	51	2.90	+ 0.06	1.03	2.0	8	12	9	18	s.	Dr. Peru Hutt.
Waynesville	Warren	700	26	38.4	− 3.4	68	11	12	13	50	2.51	− 0.64	1.04	1.0	6	8	8	14	sw.	Charles Michener.
Wooster	Wayne	1,030	32	36.8	− 3.0	65	10	10	13	44	2.50	− 0.24	0.81	4.4	11	3	2	25	sw.	Experiment Sation.
Youngstown	Mahoning	846	18	.....	.....	.....	.....	.....	.....	.....	2.74	+ 0.02	0.72	9.3	13	17	9	13	.....	G. R. Pattont.
Zanesville	Muskingum	700	24	.....	.....	.....	.....	.....	.....	.....	1.67	− 0.87	0.47	2.2	8	6	1	23	sw.	S. G. Sprague.
Indiana.																				
Anderson	Madison	892	16	36.8	− 5.5	70	11	11	13	54	3.28	+ 0.28	1.34	7.5	7	10	8	12	sw.	W. H. Stanton.
Attica	Fountain	522	1	.....	.....	.....	.....	.....	.....	.....	3.20	.....	1.11	3.0	10	.....	.....	.....	.....	Robt. E. Ray.
Bloomington	Monroe	744	16	35.5	− 8.8	77	11	11	13†	40	2.95	− 0.36	0.82	1.3	11	12	5	13	se.	Earl E. Ramsey.
Bluffton	Wells	835	16	36.5	− 3.4	72	11	10	13	53	3.18	+ 0.29	0.64	1.7	16	13	7	10	sw.	Tom R. Johnston.
Butlerville	Jennings	767	26	39.6	− 3.7	76	11	12	13	57	4.88	+ 1.18	1.87	2.5	9	12	5	13	sw.	C. F. Hole.
Cambridge City	Wayne	941	20	35.6	− 4.6	71	11	11	13	35	3.40	+ 0.50	0.85	1.0	11	13	3	16	sw.	Charles Lemberger.
Columbus	Bartholomew	632	28	37.8	− 4.6	72	11	11	13	32	2.66	− 0.62	0.76	1.2	11	10	4	16	sw.	John A. Perry.
Connersville	Fayette	769	29	38.8	− 2.5	71	12	11	13	54	2.50	− 0.84	1.09	T.	4	3	11	16	sw.	H. T. Swindler.
Crawfordsville	Montgomery	780	1	37.4	.....	73	11	10	13	57	3.23	.....	1.50	4.0	4	8	12	10	sw.	P. H. Burns.
Delphi	Carroll	668	26	34.9	− 4.3	76	11	11	13†	38	3.13	− 0.05	1.00	6.5	11	3	12	15	.....	L. A. Higginbotham.
Eminence	Morgan	782	5	37.6	.....	76	11	10	13	58	3.22	.....	0.90	T.	5	14	11	5	w.	E. E. Kelso, M. D.
Evansville	Vanderburg	386	35	40.8	− 4.5	75	11	17	12	35	3.66	− 0.45	1.57	1.0	10	8	9	13	s.	U. S. Weather Bureau.
Farmersburg	Sullivan	.....	13	38.0	− 6.0	75	11	10	12	61	1.88	− 0.36	0.88	2.5	4	1	21	8	s.	Maurice Yeager.
Farmland	Randolph	1,101	29	37.8	− 2.8	69	11	13	13	22	3.26	+ 0.16	1.05	2.5	8	10	1	19	nw.	W. J. Davisson.
Greenfield	Hancock	905	8	37.8	.....	69	11†	11	13	52	2.81	.....	0.91	0.5	6	0	16	14	sw.	Frank Larrabee.
Greensburg	Decatur	954	15	37.6	− 6.4	69	11†	15	30	53	3.40	+ 0.37	1.15	1.0	7	10	12	8	w.	C. C. Morrison, M. D.
Huntingburg	Dubois	462	3	43.0	.....	74	11	14	13	54	4.06	.....	1.52	.....	5	.....	.....	.....	.....	H. Dufendach.
Huntington	Huntington	741	18	36.4	− 3.6	72	11	10	13	56	3.81	+ 0.57	1.28	8.0	11	9	7	14	sw.	Chas. McGrew.
Indianapolis	Marion	822	40	36.8	− 4.8	73	11	12	13	37	3.54	+ 0.02	1.77	1.2	9	4	10	16	s.	Section Center.
Jeffersonville	Clark	455	29	41.3	− 4.2	74	11†	16	13	54	3.69	− 0.22	1.93	T.	7	10	7	13	w.	John C. Loomis.
Judyville	Warren	.....	4	34.2[a]	.....	72[a]	11	.....	.....	59[a]	2.72	.....	1.00	1.5	7	15	6	9	nw.	Dale R. Warrick.
Kokomo	Howard	840	19	35.9	− 4.9	74	11	9	13	57	3.44	+ 0.48	0.90	3.3	9	7	11	12	sw.	P. H. Robertson.
Lafayette	Tippecanoe	617	32	34.6	− 5.1	74	11	9	12	35	3.08	+ 0.03	0.94	3.7	10	13	6	11	sw.	Wm. J. Jones, jr.
Laurel	Franklin	.....	1	37.6	.....	.....	.....	70	12	11	12†	53	2.52	.....	0.73	0.6	9	8	1	21	sw.	Burch Schultze.
Logansport	Cass	620	31	35.9	− 4.5	73	11	11	13	34	3.77	+ 0.62	1.14	4.7	13	11	3	16	e.	Chas. Massena.
Madison	Jefferson	460	19	41.4	− 2.7	75	12	16	13	55	3.57	+ 0.38	1.51	0.5	6	8	8	14	w.	Miss F. Cooperider.
Marengo	Crawford	363	29	39.8	− 5.1	72	11†	14	13	51	4.15	− 0.55	1.67	0.1	6	8	5	17	nw.	J. M. Johnson.
Marion	Grant	814	25	36.4	− 3.8	74	11†	9	13	59	3.71	+ 0.58	1.31	2.6	8	4	18	8	nw.	James F. Hood.
Mauzy	Rush	980	31	36.7	− 3.1	70	11†	10	13	56	2.98	− 0.53	0.69	3.0	7	6	10	14	s.	Elwood Kirkwood.
Monticello	White	674	1	.....	.....	.....	.....	.....	.....	.....	3.11	.....	1.03	1.0	9	13	6	11	sw.	J. E. Loughry.
Moores Hill	Dearborn	980	10	38.6	− 4.8	69	11†	12	13	51	2.74	+ 0.48	1.16	1.7	9	9	3	18	sw.	W. S. Bigney.
Mount Vernon	Posey	410	25	39.8	− 5.8	79	11	16	13	32	2.66	− 1.27	0.92	T.	6	12	4	14	nw.	Guy B. Green.
Paoli	Orange	611	14	40.0	− 4.5	74	11	12	13	56	2.75	− 0.29	1.08	T.	7	10	6	14	sw.	James A. Gillum.
Princeton	Gibson	481	29	40.7	− 3.2	75	11	14	13	57	3.32	− 0.19	1.17	1.0	5	5	4	21	sw.	Albert Mills.
Richmond	Wayne	972	26	37.2	− 3.6	68	11†	11	13	52	2.62	− 0.47	0.76	2.1	10	5	11	14	.....	Walter Vossler.
Rochester	Fulton	775	6	36.9	.....	71	11	12	13	53	4.50	.....	1.41	10.0	11	8[a]	9[a]	12[a]	.....	G. P. Keith.
Rockville	Parke	722	25	35.4	− 6.6	75	11	9	13	53	2.94	− 0.50	0.95	2.0	5	9	6	15	s.	Dr. W. N. Wirt.
Rome	Perry	370	8	43.0	.....	74	11	15	13	53	4.54	.....	2.13	T.	10	7	5	18	sw.	Adam Anspach.
Salamonia	Jay	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salem	Washington	717	18	39.4	− 5.2	72	12	12	13	55	4.61	+ 1.27	1.85	1.0	7	8	4	18	s.	Emmet S. Allen.

TABLE 1.—*Climatological data for November, 1911. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Indiana—Continued.																				
Scottsburg	Scott	570	17	41.6	− 3.3	72	11†	15	13	52	3.51	+ 0.46	1.60	1.0	7	8	6	16	s.	Frank H. Park.
Seymour	Jackson	610	24	40.2	− 3.3	74	11	13	13	52	3.57	+ 0.09	1.16	0.2	7	9	9	12	sw.	J. Robt. Blair.
Shelbyville	Shelby	768	7	38.0	.....	70	11†	12	13	55	3.62	.....	1.10	1.2	8	4	19	7	sw.	Edgar G. Hodgson.
Shoals	Martin	523	4	.....	.....	.....	.....	.....	.....	.....	3.95	.....	1.40	1.0	7	.....	.....	.....	.....	Rev. G. Halleck Rowe.
Terre Haute	Vigo	498	21	38.3	− 6.1	75	11	12	13	59	3.80	+ 0.59	1.58	0.6	8	15	4	11	sw.	Prof. R. G. Gillum.
Veedersburg	Fountain	612	12	37.7	− 4.5	75	11	10	13	59	2.85	+ 0.70	0.87	1.5	8	15	7	8	s.	L. A. Culver, jr.
Vevay	Switzerland	525	30	42.7	− 2.4	74	11	18	13	45	5.90	+ 2.54	2.10	T.	5	5	8	17	sw.	Miss Frederica Boerner.
Vincennes	Knox	431	19	38.2	− 3.6	76	11	12	13	34	3.82	+ 0.30	1.12	T.	9	9	3	18	w.	Garrett V. List.
Washington	Daviess	484	15	39.4	− 6.4	76	11	13	13	54	3.14	0.00	1.14	.....	7	6	3	21	sw.	Charles C. Feagans.
Whitestown	Boone	529	3	34.6	.....	72	11	10	13	33	3.58	.....	1.21	4.0	12	4	21	5	sw.	Clyde O. Laughner.
Winona Lake	Kosciusko	865	4	36.2	.....	71	11	10	13	54	5.28	.....	1.80	8.2	12	1	21	8	w.	Rev. Albert A. Young.
Worthington	Greene	526	29	38.6	− 4.4	75	11	12	13	56	3.55	− 0.15	1.03	1.5	7	8	10	12	sw.	D. W. Solliday.
Illinois.																				
Albion	Edwards	531	20	39.8	− 3.8	76	11	10	13	58	2.92	− 0.53	1.05	1.3	6	9	12	9	sw.	B. F. Michels.
Carmi	White	399	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Berry.
Casey	Clark	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.57	.....	1.37	3.1	6	10	14	6	.....	William Chenoweth.
Charleston	Coles	720	26	37.8	− 4.3	75	11	13	13	58	2.84	− 0.42	0.98	1.5	10	8	10	12	w.	Jacob B. Daisy.
Danville	Vermilion	604	10	37.2	− 2.5	75	11	11	13	59	3.36	+ 0.17	1.19	3.2	9	14	3	13	w.	J. J. Lemon.
Equality	Gallatin	421	13	43.1	− 4.5	77	11†	15	13†	60	3.06	− 0.01	1.19	T.	8	14	1	15	n.	Dr. L. W. Gordon.
Fairfield	Wayne	495	18	40.5	− 4.6	76	11	12	13	58	.....	.....	1.20	0.5	11	9	5	16	nw.	George A. Tromly.
Flora	Clay	495	25	38.4	− 4.1	75	11	13	13	59	2.91	− 0.43	1.15	1.0	5	11	7	12	nw.	Joseph S. Peak.
Golconda	Pope	500	33	.....	.....	84	11	14	13†	53	4.00	− 0.20	1.57	T.	7	9	7	14	nw.	Dr. D. Lawrence.
Hoopeston	Vermilion	715	10	35.9	− 4.8	74	11	10	13	57	3.54	+ 0.93	1.40	3.2	10	12	6	12	.....	S. F. Hoskinson.
McLeansboro	Hamilton	462	28	40.5	− 4.2	76	11	13	13	59	3.07	− 0.39	1.23	0.4	8	13	7	10	s.	Prof. W. C. Fairweather.
Metropolis	Massac	346	.....	.....	.....	.....	.....	.....	.....	.....	3.32	.....	0.90	T.	7	.....	.....	.....	.....	Prof. M. N. McCartney.
Montrose	Effingham	599	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. C. Spitler.
Mount Carmel	Wabash	424	10	38.6	− 4.9	74	11	14	13†	34	3.36	− 0.36	1.14	2.3	12	10	2	18	.....	Mrs. H. M. Phillips.
New Burnside	Johnson	556	16	42.0	− 5.1	77	11†	11	29	62	2.14	− 1.20	0.90	T.	4	21	1	8	s.	Thomas H. McCabe.
Newton	Jasper	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. M. Hicks.
Olney	Richland	486	24	40.6	− 3.4	80	11	13	13	59	3.03	− 0.47	0.95	2.7	8	6	14	10	sw.	Victor E. Phillips.
Palestine	Crawford	500	29	38.6	− 4.2	75	11	11	13	61	2.26	− 1.34	0.98	1.0	5	8	8	14	sw.	Duane Shaw.
Paris	Edgar	600	18	36.5	− 5.4	74	11	10	13	39	3.00	− 0.31	0.95	3.5	7	10	17	3	nw.	H. P. Twyman.
Philo	Champaign	700	27	35.2	− 4.2	74	11	11	13	37	2.82	− 0.27	0.79	2.6	10	11	8	11	nw.	H. A. Burr.
Rantoul	do	768	20	36.0	− 3.7	75	11	9	13	60	3.24	+ 0.58	1.15	2.5	7	13	5	12	sw.	William Breiner.
Rileyville	Saline	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.55	.....	0.90	T.	6	.....	.....	.....	.....	W. H. Thornberry.
Robinson	Crawford	500	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Sumner	Lawrence	459	5	39.2	.....	74	11	12	12	61	2.39	.....	1.02	0.5	6	10	13	7	s.	O. A. Fyffe.
Tuscola	Douglas	644	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. W. Lester.
Urbana	Champaign	725	10	35.0	− 5.7	75	11	9	12	34	2.83	+ 0.03	1.05	2.5	9	1	21	8	sw.	Prof. J. G. Mosier.
Kentucky.																				
Alpha	Clinton	.....	17	45.8	− 3.2	68	11	18	13	30	5.47	+ 1.41	1.85	1.0	6	11	1	18	w.	W. W. Hicks.
Anchorage	Jefferson	700	10	39.2	− 4.9	72	11	13	13	50	3.71	+ 0.78	1.70	T.	6	10[a]	2[a]	17[a]	nw.	C. E. Barrett.
Bardstown	Nelson	637	14	41.4	− 5.2	75	11	14	13	33	5.12	+ 1.74	2.25	0.5	7	10	1	19	sw.	G. M. Talbott.
Beattyville	Lee	650	7	39.4	.....	73	10†	13	13	49	4.70	+ 1.73	1.44	3.0	12	5	10	15	e.	G. W. Cann.
Beaver Dam	Ohio	441	8	40.8	.....	75	11	15	13	41	5.03	.....	2.10	T.	8	12	8	10	w.	W. T. Austin.
Berea	Madison	1,070	10	42.4	− 4.3	72	12	12	13	50	4.96	+ 2.16	2.13	1.4	9	7	3	20	sw.	C. F. Rumold.
Bowling Green	Warren	500	22	42.2	− 4.7	75	11	13	13	40	5.60	+ 1.54	2.25	.....	8	12	0	18	s.	Mrs. L. G. Causey.
Burnside	Pulaski	773	20	.....	.....	.....	.....	.....	.....	.....	4.12	+ 0.45	0.88	0.5	11	9	7	14	ne.	G. M. Estes.
Calhoun	McLean	397	8	43.2	.....	76	11	14	13	56	5.06	.....	2.23	T.	8	7	9	14	sw.	W. A. Taylor.
Catlettsburg	Boyd	544	22	.....	.....	.....	.....	.....	.....	.....	4.32	+ 1.18	0.96	1.5	10	11	3	16	w.	Mrs. Mertie M. Bruns.
Earlington	Hopkins	370	21	41.4	− 6.3	76	11	14	13	37	5.34	+ 0.96	2.49	T.	8	13	3	14	nw.	Brick Southworth.
Edmonton	Metcalfe	600	20	42.6	− 4.2	74	6	13	13	31	5.01	+ 1.11	1.59	1.6	10	12	0	18	s.	Miss Lee Ray.
Eubank	Pulaski	1,177	17	41.0	− 3.7	70	11	12	13	39	4.03	+ 0.91	1.00	1.0	11	5[a]	5[a]	19[a]	sw.	Mrs. Katie Payne.
Falmouth	Pendleton	530	22	.....	.....	.....	.....	.....	.....	.....	3.71	+ 0.09	1.20	T.	6	9	5	16	sw.	J. V. Oldham.
Farmers	Rowan	668	5	42.2	.....	75	11	12	13	52	5.07	.....	2.15	.....	5	14	2	14	w.	Miss Gertrude Sorrell.
Frankfort	Franklin	560	20	43.4	− 2.8	73	11	16	13	41	4.87	+ 1.46	2.36	1.2	7	12	2	16	n.	J. H. Roberts
Franklin	Simpson	691	17	43.9	− 4.3	72	11†	13	13	50	6.03	+ 2.07	2.05	T.	7	6	14	10	nw.	J. E. Newman.
Greensburg	Green	581	19	39.4	− 5.3	72	17	11	13†	45	5.77	+ 2.09	2.00	0.5	10	12[a]	0[a]	17[a]	n.	L. C. Alcorn.
High Bridge	Jessamine	762	8	.....	.....	.....	.....	.....	.....	.....	4.80	+ 1.82	1.80	1.0	8	11	3	16	.....	Miss Lulu Wood.
Hopkinsville	Christian	524	15	44.8	− 3.3	85	11	15	13	51	4.62	+ 0.14	2.20	T.	7	12	2	16	w.	W. F. Randle.
Irvington	Breckenridge	.....	13	41.8	− 4.3	73	11	15	13	53	4.32	+ 0.92	1.95	T.	5	11	0	19	s	W. J. Piggott.
Leitchfield	Grayson	635	15	42.0	− 4.6	72	11	14	13	50	4.83	+ 0.40	.....	T.	.....	12	2	16	sw.	John E. Stone.
Lexington	Fayette	989	23	39.8	− 4.9	71	11	13	13	56	3.84	+ 0.36	1.56	1.6	10	5	6	19	w.	U. S. Weather Bureau.
Loretto	Marion	681	14	42.6	− 3.5	73	11	12	22	52	3.03	+ 0.92	2.04	.....	.....	11[a]	4[a]	14[a]	.....	Loretto Academy.
Louisville	Jefferson	525	40	42.0	− 4.3	74	12	17	13	54	3.79	− 0.39	2.12	T.	9	7	7	16	w.	U. S. Weather Bureau.
Marion	Crittenden	.....	16	42.2	− 6.1	75	11	14	13	56	3.83	− 0.26	0.95	T.	6	10	7	13	nw.	B. C. Paris.
Maysville	Mason	524	14	39.6	− 4.7	75	11	13	13	43	3.83	+ 0.85	0.87	4.3	11	11	3	16	se.	Mrs. Mary D. Marsh.
Middlesboro	Bell	1,128	16	43.8	− 2.1	71	12	15	13	43	4.63	+ 0.96	1.51	.....	10	14	14	2	.....	B. H. Perkins.
Mount Sterling	Montgomery	930	21	38.6	− 5.7	71	11	12	13	35	4.98	+ 1.53	1.45	3.5	9	8	9	13	n.	James O'Connell.
Owensboro	Daviess	479	14	41.2	− 6.5	74	11	16	13	35	4.24	+ 0.83	2.15	T.	7	8	2	20	nw.	Henry S. Berry.
Paducah	McCracken	341	22	.....	.....	.....	.....	.....	.....	.....	4.48	+ 0.14	2.00	.....	9	17	0	13	s.	S. A. Fowler.
Pikeville	Pike	.....	3	.....	.....	.....	.....	.....	.....	.....	3.14	.....	0.80	1.5	8	13	2	15	.....	I. M. Williams.
Richmond	Madison	925	19	41.5	− 5.3	72	11	14	13	30	5.32	+ 2.63	2.20	.....	8	8	2	20	.....	J. W. Crooke.
St. John	Hardin	777	15	39.4	− 6.1	75	11	10	13†	37	5.32	+ 1.60	2.25	0.5	7	16	0	14	.....	Bethlehem Academy.
Scott	Kenton	.....	13	40.2	− 4.1	70	11	9	13	50	3.23	+ 0.37	1.17	1.0	7	10	7	13	s.	E. B. Wilson.
Shelby City	Boyle	1,087	17	40.4	− 1.3	72	11	9	13	40	4.82	+ 1.51	2.37	.....	8	11	4	15	sw.	H. F. Ewing.
Shelbyville	Shelby	759	22	40.9	− 3.0	74	12	14	12	60	3.00	− 0.95	1.44	.....	6	11	11	8	sw.	C. R. Burnett.
Taylorsville	Spencer	489	9	41.7	− 2.8	73	11†	15	13	51	4.20	+ 0.84	1.88	0.1	9	7	2	21	sw.	E. D. Bourne.
Williamsburg	Whitley	939	15	44.1	− 3.1	70	10†	15	13†	50	4.38	+ 1.10	1.47	1.0	11	11	0	19	e.	Noble C. Jones.
Williamstown	Grant	943	9	38.0	− 6.8	71	11	11	13	40	3.26	+ 0.90	1.10	0.3	8	11	5	14	.....	Mrs. Sarah E. Carter.
Tennessee.																				
Ashwood	Maury	725	32	46.6	− 2.4	76	6	16	13	42	3.07	− 0.70	1.45	T.	7	10	3	17	s.	Mrs. Joseph W. Fleming.
Benton	Polk	880	26	45.9	− 3.3	74	11†	18	13	44	4.73	+ 1.71	1.23	T.	9	11	8	11	n.	George L. Williams.
Birds Bridge	Greene	.....	5	.....	.....	.....	.....	.....	.....	.....	3.10	.....	0.72	T.	13	8	4	18	w.	David B. George.
Bluff City	Sullivan	.....	14	.....	.....	.....	.....	.....	.....	.....	3.72	+ 1.38	1.19	T.	10	11	1	18	ne.	John W. Fisher.
Byrdstown	Pickett	1,026	18	45.3	− 2.6	72	12	15	13	45	5.26	+ 1.41	1.40	T.	7	9	4	17	s.	John Lacy.
Carthage	Smith	500	27	47.8	− 0.6	78	6	17	13	39	4.44	+ 0.65	1.31	T.	13	12	3	15	nw.	Earl C. Pickering.
Cedar Hill	Robertson	625	11	44.8	.....	75	6	14	13	42	6.09	.....	2.30	T.	11	12	5	13	s.	J. Frank Ruffin.
Celina	Clay	494	8	.....	.....	.....	.....	.....	.....	.....	5.07	.....	1.77	.....	9	10	6	14	s	Stephen B. Anderson.
Center Point	Chester	400	14	.....	.....	.....	.....	.....	.....	.....	3.94	.....	1.35	T.	8	13	1	16	s.	Halbert H. Bailey.
Charleston	Bradley	709	14	.....	.....	.....	.....	.....	.....	.....	5.11	+ 2.00	1.15	T.	12	11	0	19	n.	John T. Weeks.
Chattanooga	Hamilton	808	32	45.8	− 4.5	73	12	18	13	49	4.23	+ 0.65	1.35	0.1	14	13	2	15	ne.	U. S. Weather Bureau.
Clarksville	Montgomery	500	48	45.0	− 2.0	75	11†	18	13	51	4.92	+ 0.70	1.62	0.3	13	13	4	13	n.	Prof. James A. Lyon.
Clinton	Anderson	800	23	.....	.....	.....	.....	.....	.....	.....	3.94	+ 0.71	1.10	.....	7	16	1	13	sw.	Hugh Evans.
Dandridge	Jefferson	.....	7	.....	.....	.....	.....	.....	.....	.....	4.14	.....	1.10	.....	7	12	7	11	w.	James E. Swann.
Decatur	Meigs	850	15	44.8	− 3.8	70	7†	17	13	40	5.00	+ 1.70	1.32	T.	13	15	5	10	sw.	J. Worth Lillard.

TABLE 1.—*Climatological data for November, 1911. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Tennessee*—Continued.**																				
Dickson	Dickson	800	15	46.4	− 2.8	79	6	15	13†	44	5.11	+ 1.09	2.41	.....	6	10	7	13	s.	Nathan R. Sugg.
Dover	Stewart	500	16	44.8	− 3.6	78	11	17	13†	45	6.14	+ 1.59	2.50	T.	6	12	3	15	s	Asa M. Tippit.
Dunlap	Sequatchee	726	2	46.0	.....	79	17	18	13	46	5.68	.....	1.38	T.	11	11	7	12	.....	S. Bradford Boyd.
Elizabethton	Carter	1,575	21	.....	.....	.....	.....	.....	.....	.....	1.87	− 0.31	0.84	.....	6	15	1	14	e.	Charles Boyd.
Erasmus	Cumberland	1,850	14	41.6	− 3.1	71	6	14	13	46	4.72	+ 1.12	1.44	0.2	8	15	6	9	se.	Mrs. Sara E. Ashley.
Florence	Rutherford	560	29	45.8	− 2.8	72	6	17	13	40	4.15	+ 0.62	1.62	1.0	7	12	5	13	s.	Erastus P. Bell.
Franklin	Williamson	648	21	45.9	− 2.0	74	6	17	13	42	4.94	+ 1.44	1.98	T.	7	13	2	15	.....	Young M. Rizer.
Halls Hill	Rutherford	.....	9	.....	.....	.....	.....	.....	.....	.....	4.43	.....	1.61	T.	7	13	1	16	n.	Ed F. Wright.
Harriman	Roane	841	16	44.4	− 3.0	72	11	17	13†	34	5.09	+ 1.67	1.50	T.	9	9	17	4	.....	Robert R. Ayres.
Hohenwald	Lewis	983	25	46.2	− 2.1	76	6	14	30	48	5.66	+ 1.62	2.10	T.	10	12	8	10	sw.	John Lutzelman.
Iron City	Lawrence	600	14	45.6	− 4.1	76	6	13	30	40	2.54	− 0.91	1.50	0	5	6	17	7	sw.	Capt. H. Paul Seavy.
Jefferson City	Jefferson	.....	1	.....	.....	.....	.....	.....	.....	.....	4.12	.....	0.99	2.0	9	.....	.....	.....	.....	Calvin C. Maddox.
Johnson City	Washington	1,620	....	42.2	− 3.7	77	11	12	13	39	3.06	+ 0.03	0.83	T.	12	3	13	14	w.	Ward Crosby.
Johnsonville	Humphreys	364	15	45.8	− 3.4	77	11	17	13†	49	5.88	+ 1.52	2.56	T.	11	12	4	14	s.	Miss Sallie B. Matthews.
Kingston	Roane	.....	20	.....	.....	.....	.....	.....	.....	.....	5.15	+ 2.02	0.99	T.	9	11	0	19	n.	Henry Crumbliss.
Knoxville	Knox	977	40	44.5	− 2.6	72	12	17	13	50	4.37	+ 0.77	1.07	1.0	10	7	14	9	sw.	U. S. Weather Bureau.
Lebanon	Wilson	522	2	46.0	.....	77	6	16	13	45	4.65	.....	2.00	T.	9	11	4	15	s.	H. Logan Fields.
Lewisburg	Marshall	727	16	46.8	− 2.8	79	6	16	30	47	4.34	+ 1.30	1.34	0.1	13	16	3	11	se.	Dr. Robert D. Crutcher
Livingston	Overton	1,065	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Loudon	Loudon	816	8	.....	.....	.....	.....	.....	.....	.....	4.56	+ 1.53	1.21	0.1	8	8	3	19	w.	Robert W. Clark.
Lynnville	Giles	770	23	44.6	− 4.3	73	6	18	13	30	3.84	+ 0.51	1.29	T.	7	4	18	8	n.	Col. James H. Burrow.
McGhee	Monroe	.....	7	.....	.....	.....	.....	.....	.....	.....	4.24	.....	0.88	T.	9	11	0	19	e.	Miss Alice L. Headrick.
McMinnville	Warren	1,011	27	45.8	− 2.6	74	6	15	13†	43	5.19	+ 1.55	1.47	1.6	9	8	12	10	nw.	J. Tilden Sparkman.
Maryville	Blount	1,050	15	45.0	− 3.5	72	12	12	13	41	4.85	+ 1.73	1.12	T.	8	16	4	10	w.	Mrs. Sam T. Broyles.
Mountain City	Johnson	2,486	14	41.8	− 0.6	78	11	13	22	44	2.71	+ 0.34	1.23	T.	6	17	9	4	.....	Edward E. Barry.
Nashville	Davidson	654	40	44.9	− 3.8	76	6	18	13	52	4.38	+ 0.53	1.88	T.	10	10	6	14	nw	U. S. Weather Bureau.
Newport	Cocke	1,280	21	45.0	− 1.1	71	12	19	13	39	3.47	+ 0.74	0.68	T.	10	8	2	20	w.	Dr. Charles T. Burnett.
New River	Scott	1,215	4	.....	.....	.....	.....	.....	.....	.....	3.35	.....	0.90	1.5	6	13	2	15	w.	Burl W. Buttram.
Palmetto	Bedford	770	18	45.6	− 4.8	77	16	18	25†	42	4.06	+ 1.14	1.33	T.	9	12	8	10	s.	Mrs. Ross Woods.
Pinewood	Hickman	.....	4	[a]44.5	.....	78	6	13	30	....	4.75	.....	2.34	T.	.....	.....	.....	.....	.....	Miss Carrie Cash.
Pope	Perry	400	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rogersville	Hawkins	1,150	26	43.6	− 2.6	71	11	16	13	38	4.20	+ 1.33	0.96	T.	14	15	7	8	w.	Fred Beal.
Rugby	Morgan	1,410	23	41.6	− 3.1	68	12†	10	13	45	4.20	+ 0.64	1.52	1.5	11	8	4	18	n.	Samuel G. Wilson.
Savannah	Hardin	442	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Carrington.
Sevierville	Sevier	.....	5	44.2	− 4.0	75	12	17	13	44	4.00	+ 0.35	0.95	2.0	11	4	11	15	sw.	Herbert O. Eckel.
Sewanee	Franklin	2,000	15	43.3	− 4.9	69	16	12	13	32	2.80	− 0.85	.....	0.5	8	10	5	15	n.	Arthur H. Noll.
Sparta	White	920	5	44.4[d]	.....	73	6	16	13	44[d]	2.87	.....	.....	0.7	.....	.....	.....	.....	w.	Ernest H. Hull.
Springville	Henry	377	8	44.6	.....	77	11	15	13	52	5.45	.....	1.88	T.	10	13	5	12	n.	Hudnall A. Boden.
Tazewell	Claiborne	.....	14	40.2	− 6.0	72	12	12	13	39	4.13	+ 0.96	1.24	0.5	10	9	3	18	sw.	J. Caloway Carr.
Tullahoma	Coffee	1,075	23	45.2	− 1.9	74	6	15	13	43	4.52	+ 1.11	1.20	0.3	9	7	17	6	s.	Reuben T. Moore.
Walling	White	909	8	.....	.....	.....	.....	.....	.....	.....	3.20	.....	1.20	T.	6	11	4	15	s.	John K. Roberts.
Waynesboro	Wayne	753	25	45.7	− 2.9	76	6	14	30	48	4.56	+ 1.07	1.69	T.	9	11	6	13	s.	Harry C. Boyd.
Wildersville	Henderson	400	14	47.4	− 2.6	78	6	18	13†	52	4.43	+ 0.53	1.60	T.	8	.....	.....	.....	.....	William R. Wilson.
Worsham	Sumner	550	10	.....	.....	.....	.....	.....	.....	.....	5.10	.....	1.95	T.	6	13	4	13	w.	James G. Elizer.
Yukon	Lincoln	850	14	45.2	− 6.0	74	6	15	13	37	4.87	+ 1.29	1.16	T.	6	14	6	10	n.	William P. Watson.
Alabama.																				
Bridgeport	Jackson	660	11	.....	.....	.....	.....	.....	.....	.....	4.39	+ 1.22	0.74	T.	11	.....	.....	.....	n.	R. L. Moore.
Decatur	Morgan	573	29	45.1	− 5.7	76	6	19	30	42	3.62	+ 0.29	0.99	T.	10	15	0	15	n.	Ernest A. Carriger.
Florence	Lauderdale	563	27	45.2	− 5.8	76	6	17	30	37	4.06	+ 0.99	1.00	T.	7	17	2	11	e.	Robt. E. Coburn.
Guntersville	Marshall	580	1	47.6[a]	.....	84	7	20	13	46	4.26	.....	0.94	T.	10	9	6	15	n.	L. S. Long.
Madison	Madison	573	17	44.7[a]	− 6.8	77	6	11	25	43	3.01	− 0.02	0.71	T.	5	13	7	10	n.	L. S. Hager.
Riverton	Colbert	360	14	43.8	− 6.3	78	6	11	30	44	4.45	+ 1.09	1.34	T.	7	15	3	12	n.	James F. Long.
Scottsboro	Jackson	652	28	47.0	− 3.2	78	15	19	25	42	3.62	+ 0.04	1.00	T.	10	10[a]	2[a]	17[a]	se.	H. A. Caldwell.
Tuscumbia	Colbert	488	29	45.8	− 5.4	77	6	19	30	39	3.00	− 0.10	0.70	0	8	11	2	17	se.	Samuel Moore.
Georgia.																				
Diamond	Gilmer	2,020	21	44.4[a]	− 4.2	71[a]	16	17[a]	13	40	4.88	+ 1.12	1.03	T.	9	14	5	11	.....	R. A. Kimzey.
Mineral Bluff	Fannin	1,571	....	44.2	.....	70	11†	16	13†	45	3.44	.....	1.22	T.	8	5	22	3	n.	J. M. Clement.
North Carolina.																				
Altapass	Mitchell	2,629	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. J. Woodward.
Andrews	Cherokee	1,800	1	46.0	.....	77	16	16	25	50	4.87	.....	1.13	T.	11	14	12	4	n.	J. D. Link.
Asheville	Buncombe	2,255	32	41.8	− 3.3	70	11	13	13	48	2.20	− 1.10	0.62	T.	10	12	8	10	nw.	U. S. Weather Bureau.
Banners Elk	Avery	3,750	3	36.6	.....	68	11	8	13	44	3.66	.....	1.07	2.0	9	13	6	11	w.	T. L. Lowe.
Blowing Rock	Watauga	4,090	3	40.8[c]	.....	60	28	8	13	40	.....	.....	.....	.....	.....	.....	.....	.....	w.	H. S. Deal.
Brevard	Transylvania	2,230	10	41.8	− 3.1	66	11†	11	30	40	4.96	+ 1.78	1.50	0	6	16	13	1	s.	W. E. Breese.
Bryson City	Swain	2,000	23	.....	.....	.....	.....	.....	.....	.....	4.22	+ 0.77	1.11	0	10	.....	.....	.....	.....	D. K. Collins.
Cullowhee	Jackson	2,100	1	44.0	.....	71	11	14	25†	46	3.43	.....	0.91	T.	9	16	1	13	nw.	F. H. Brown.
Eagles Nest	Haywood	5,050	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. C. Satterthwait.
Hendersonville	Henderson	2,167	15	41.8	− 4.7	67	10†	15	13	42	3.88	+ 0.96	0.97	0	12	17	5	8	nw.	Dr. L. B. Morse.
Highlands	Macon	3,670	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. G. Harbison.
Hot Springs	Madison	1,326	13	47.0	− 2.8	75	10	18	30	42	2.52	.....	0.90	1.5	9	14	9	7	e.	P. A. Garner.
Jefferson	Ashe	2,800	4	40.7	.....	66[a]	4	12	13	43[a]	4.16	.....	1.66	T.	7	12	2	16	w.	Prof. E. J. Johnson.
Marshall	Madison	1,646	10	44.0[c]	− 3.0	75	10	16	13	45	2.59	+ 0.67	0.86	T.	5	.....	.....	.....	.....	M. L. Church.
Murphy	Cherokee	1,614	35	.....	.....	.....	.....	.....	.....	.....	4.48	+ 0.15	1.17	T.	12	.....	.....	.....	.....	James C. Midyett.
Rock House	Macon	3,100	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Barry C. Hawkins.
Waynesville	Haywood	2,756	17	42.8	− 2.9	72	11	13	13	38	3.88	+ 1.39	1.04	T.	10	12	5	13	sw.	Judge J. C. L. Gudger.
Virginia.																				
Big Stone Gap	Wise	1,540	20	43.1	− 0.9	69	12	15	13	39	4.62	+ 1.08	1.43	1.8	8	11	8	11	n.	John W. Fox, sr.
Blacksburg	Montgomery	2,170	20	38.8	− 3.4	71	11	14	13	46	2.72	+ 0.57	1.15	T.	8	11	5	14	w.	Agr. Exp. Station.
Burkes Garden	Tazewell	3,250	16	36.8	− 3.5	69	11	5	13	35	3.60	+ 0.60	1.08	1.0	9	6	6	18	w.	C. H. Greever.
Elk Knob	Lee	3,243	8	41.2	.....	65	11†	10	13	43	3.84	.....	1.10	1.5	10	9	6	15	sw.	Henry Nicoll.
Ivanhoe **	Wythe	2,028	15	38.4	.....	62	11†	16	13	30	2.29	.....	0.45	T.	16	7	13	10	w.	Miss Alice G. Jewett.
Lebanon	Russell	2,131	1	42.4	.....	76	11	11	13	46	2.67	.....	0.82	2.5	7	16	5	9	nw.	R. D. Swain.
Max Meadows	Wythe	2,028	15	37.4	− 6.1	73	11	9	13	40	2.18	+ 0.22	0.92	T.	7	11	13	5	nw.	James M. Graham.
Mendota	Washington	1,350	2	.....	.....	.....	.....	.....	.....	.....	3.82	.....	1.35	1.0	10	.....	.....	.....	.....	Frank M. Parker.
Mountain Lake	Giles	4,348	1	36.4	.....	67	11	11	30	34	2.14	.....	1.20	0.4	5	13	9	8	n.	H. E. Dorland.
Wytheville	Wythe	2,293	18	38.9	− 4.2	73	11	13	13	39	2.10	− 0.94	0.94	1.0	12	11	8	11	w.	U. S. Weather Bureau.

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1911. District No. 3, Ohio Valley.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
New York.																																
Allegany	Allegheny	.....	.08	.....	.....	.....	.25	.31	.....	.....	.12	.....	.43	.08	.10	.05	.....	.90	.02	.08	.12	.04	.....	.32	.04	.05	.....	.....	.20	.09	.....	3.28
Bolivar	....do	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Olean [1]	....do	.10	.09	.01	.....	.....	.....	.32	.15	.....	.10	.06	.....	.51	.02	.10	T.	.....	.70	.....	.07	.10	.....	.....	.23	.05	.03	.....	.....	.17	.03	2.84
Pennsylvania.																																
Aleppo	Ohio	.....	T.	.....	.....	.....	.53	.....	.....	.....	.60	.65	T.	.10	.11	.....	.....	.....	.45	.....	.02	T.	.....	.....	.40	.02	.....	.....	.....	T.	.....	2.88
Baldwin	Allegheny	.....	.15	.....	.....	.....	.55	.45	.....	T.	.05	T.	.20	.45	.....	.20	.....	.05	.47	.15	.03	.....	.....	.....	.....	.10	.....	.....	.60	T.	.....	3.45
Beaver Dam [1]	Ohio	.05	T.	T.	.....	.....	.06	.83	.....	.....	T.	.....	.04	.21	.....	.10	.05	.....	.45	.01	11	.04	.....	.....	.38	.08	T.	.....	T.	.04	.04	2.49
Brookville	Allegheny	.04	.....	.....	.....	.....	.45	.48	.05	.....	.....	.05	.55	.....	.....	.....	.....	.10	.....	.....	21	.04	.....	.....	.18	.....	.....	.04	.....	.....	.....	2.19
Clarion [1]	....do	.02	.10	.04	.....	.....	.....	.47	.....	.....	.06	.....	.....	.55	.....	.15	.....	.....	.95	.....	.10	.12	.....	.....	.37	.02	.....	.....	.....	.23	.....	3.18
Claysville	Ohio	.....	.06	.....	.....	.....	.67	T.	.....	.....	.....	.13	.30	T.	T.	.10	.05	T.	.68	.....	.02	T.	T.	.....	.49	T.	.....	.....	.07	T.	T.	2.57
Confluence [1]	Youghiogheny	.05	.....	.....	.....	.....	.20	.68	.....	.....	.....	.....	.....	.35	T.	.12	T.	.01	T.	.29	.....	.06	.04	.....	.60	.05	.....	.....	.05	.02	T.	2.56
Davis Island Dam [1]	Ohio	.02	T.	T.	.....	.....	.15	.46	T.	.....	.01	.....	.12	.27	.....	.09	.03	.....	.25	.....	.10	T.	.....	.....	.12	.13	T.	.....	.....	.....	.....	2.08
Derry Station	Allegheny	.....	T.	.....	.....	.....	.57	.....	T.	.....	.....	.27	.33	.09	.03	T.	.06	.52	.25	.....	.10	T.	.....	.....	.33	.10	.02	.....	T.	.02	T.	1.95
Franklin [1]	....do	.10	.10	.20	.....	.....	.03	.46	.06	.....	.08	.03	.11	.49	.....	.13	.....	.....	.85	T.	.13	.10	.05	.....	.43	.09	T.	.....	.....	.15	.06	2.61
Freeport [1]	....do	.05	.01	T.	.....	.....	.12	.63	.....	.....	.02	.....	.19	.54	.....	.19	.03	.....	.39	.....	.07	.05	.....	.....	.49	.10	T.	.....	.01	.02	T.	3.65
Greensboro [1]	Monongahela	.06	.01	.....	.....	.....	.16	.46	T.	.....	.....	.....	.10	.36	.....	.....	.12	.....	.48	.....	.....	.10	.....	.....	.32	.10	.02	.....	.01	.....	.....	2.91
Greensburg	Youghiogheny	.....	T.	.....	.....	.....	.60	.01	.....	T.	.01	.35	.35	T.	.12	T.	.01	T.	.29	.....	.06	.04	.....	.....	.60	.05	.....	.....	.05	.02	T.	2.30
Greenville	Ohio	T.	.42	.....	.....	.....	.39	.12	T.	T.	T.	.....	.65	T.	.20	T.	T.	.36	.30	T.	.10	T.	T.	T.	.34	T.	.....	.....	.....	.23	.....	2.56
Grove City	....do	.....	.26	.....	.....	.....	.41	.01	.....	T.	.04	.....	.74	.01	.03	.01	T.	.06	.60	.....	.26	.02	.....	.....	.44	.14	T.	.....	.....	.13	.04	3.11
Herrs Island Dam [1]	Allegheny	.04	T.	T.	.....	.....	.14	.42	.....	.....	T.	.....	.17	.40	T.	.12	.04	.....	.17	T.	.04	.08	.01	.....	.34	.06	.01	.....	.02	.02	.01	3.20
Indiana	....do	.....	.03	.....	.....	.....	.65	.....	.....	.....	.05	.56	.29	.....	.....	.10	.....	.27	.57	.....	.10	.06	.....	.....	.46	.....	.....	.....	.....	.....	.....	2.09
Irwin	Monongahela	.....	T.	.....	.....	.....	.73	.....	.....	.....	.....	.32	.35	T.	.15	.01	.01	.....	.45	.....	.04	T.	.....	.....	.62	.02	.....	.....	.....	.06	.01	3.25
Johnstown	Allegheny	.....	.07	.....	.....	.....	.92	.04	.....	.....	.06	.02	.30	.01	.10	.08	.....	.....	.70	.....	.24	T.	.....	.01	.15	.35	.....	.....	.05	.02	.....	2.77
Lock No. 4 [1]	Monongahela	.10	.....	.02	.....	.....	.13	.48	.....	.....	T.	.....	.38	.40	.....	.08	.04	.....	.38	.....	T.	.13	.....	.....	.39	.08	T.	.....	T.	T.	T.	3.12
Lycippus	Allegheny	T.	T.	.....	.....	.....	.68	.....	.....	.04	.....	.33	.35	.....	T.	.08	.....	.....	.60	.....	.07	.06	.....	.....	.55	T.	.....	.13	.....	.....	.....	2.61
Parkers Landing [1]	....do	.....	.04	.20	.....	.....	.....	.88	.....	.....	.04	.....	T.	.40	.....	.20	.....	.....	.70	.....	.40	.05	.....	.....	.72	.04	.....	.....	T.	.26	.04	2.89
Pittsburgh	Ohio	T.	T.	.....	.....	.....	.58	T.	.....	T.	T.	.13	.39	.....	.14	T.	.....	.07	.16	T.	.07	T.	.....	.10	.29	.07	.....	.....	.02	T.	.....	3.97
Saegerstown	Allegheny	.46	.....	.....	.....	.....	.....	.....	.....	.....	.12	.....	.70	.10	T.	.14	.....	.35	.51	.08	.10	.....	.....	.....	.30	.11	.....	.....	.20	.07	.....	2.02
Saltsburg [1]	....do	.06	.....	.02	.....	.....	.12	.58	.....	.....	.02	.....	.44	.50	.....	.16	.04	.....	.40	.....	.04	.04	T.	.....	.40	.08	.02	.....	.08	.02	T.	3.24
Somerset	Youghiogheny	.....	.....	.....	.....	.....	.60	.....	.....	.....	.....	.....	.15	.05	.....	.....	.30	.....	.85	.....	.10	.30	.....	.....	.35	.02	.....	.....	.20	.....	T.	3.02
Springdale [1]	Allegheny	.....	.....	.....	.....	.....	.16	.43	.....	.....	.....	.....	.20	.39	.....	.17	.03	.....	.50	.....	.45	.....	.....	.....	.35	.03	.....	.....	.03	.06	.....	2.92
Uniontown	Monongahela	.....	.13	.....	.....	.....	.68	.22	.....	.....	.....	.21	.67	.....	.....	.....	.21	.....	.42	.....	.02	T.	.....	.....	.50	.....	.....	.....	.....	.....	.....	2.80
Warren	Allegheny	.....	.10	.....	.....	.....	.40	.40	.12	.....	.40	.....	.30	.....	.....	.10	.10	.40	.20	.....	.10	.30	.....	.12	.08	.20	.....	.....	.26	.04	.....	3.12
West Newton [1]	Youghiogheny	.10	.....	T.	.....	T.	.12	.52	.01	T.	.....	.....	.51	.36	.....	.16	.04	.....	.35	.....	.01	.16	.....	.....	.38	.14	T.	.....	.02	.02	.....	3.62
Maryland.																																2.90
Deer Park	Youghiogheny	.05	T.	.....	.....	.....	1.05	.....	.....	.....	.....	.....	.10	.....	.....	.15	.....	.....	.63	.....	.03	.20	.....	.....	.20	.10	.....	.....	.....	.05	.....	2.56
Grantsville	....do	.....	.10	.....	.....	.....	.90	.....	.....	.....	.....	.....	.....	.....	.....	.....	.15	.....	.90	.....	.08	.10	.....	.....	.20	.....	.....	.....	.05	T.	.....	2.48
Oakland	....do	.05	.03	.....	.....	.....	1.23	.....	.....	.....	.....	.....	.20	.....	.....	.....	.12	.....	.40	T.	.05	.05	.....	.....	.18	.02	.....	.....	.04	.02	.....	2.39
West Virginia.																																
Bancroft [1]	Great Kanawha	.....	.....	.....	.05	.....	.53	.90	.....	.....	.....	.....	.28	.40	.02	T.	.....	.....	.73	.....	.....	.....	T.	.....	.70	.10	.....	.....	.26	.....	T.	3.97
Beckley	....do	.....	.....	.....	.....	.....	1.41	.....	.....	.....	.....	.....	.05	.....	.....	.....	.....	.....	.55	.01	.....	.....	.....	.30	.....	.....	.....	.....	.....	.....	.....	2.32
Bens Run	Ohio	.....	.....	.....	.....	.....	.75	.....	.....	.38	.74	.....	.....	.....	.....	.....	.....	.....	.69	.....	.....	T.	.....	.08	.48	.....	.....	.....	.15	.05	.....	3.32
Bluefield	Great Kanawha	.....	.....	.....	.....	.....	.90	.....	.....	.20	.....	.....	.71	.....	.....	.01	.....	.....	.90	.....	.....	.....	.....	.....	.20	.....	.....	.....	.....	.....	.....	2.92
Brandonville [1]	Monongahela	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Buckhannon	....do	.15	T.	.....	T.	.....	1.00	.....	.....	.....	.....	.....	.41	.....	T.	T.	.....	T.	T.	.....	.....	T.	.....	.....	1.20	.05	.....	.....	.15	.05	.....	3.01
Cairo	Little Kanawha	.20	.....	.....	.....	.....	.71	.....	.....	.....	.....	.....	.....	.20	.....	.....	.....	.....	.20	.....	.....	.....	.....	.....	.45	.....	.....	.....	.....	.....	.....	1.76
Central Station	Middle Island Creek.	.....	.....	.....	.....	.....	.74	.....	.....	.....	.....	.31	.68	*	.....	*	*	.....	*	.....	.....	*	.....	.....	*	*	.....	.....	*	*	.32	2.05
Charleston [1]	Great Kanawha	.12	.....	.....	.....	.....	.78	.81	.....	.....	.....	.....	.08	.66	.....	.....	.....	.....	.50	.....	.....	T.	T.	.....	.64	.10	.....	.....	.15	.10	.....	3.94
Creston [1]	Little Kanawha	.05	.....	.....	.....	.....	.60	.73	.....	.....	.....	.....	.35	.23	.....	.....	.....	.....	.73	.....	.....	T.	T.	.....	.55	.07	.....	.....	.22	.04	T.	3.57
Cuba	Sand Creek	.....	T.	T.	.....	.....	.91	.04	.....	.....	.....	.24	.10	.....	.....	.05	.....	T.	.84	.....	.....	T.	.....	.05	.57	.....	.....	.....	.18	T.	.....	2.98
Davis [1]	Monongahela	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elizabeth [1]	Little Kanawha	.01	.....	.....	.....	.....	.34	.55	.....	.....	.....	.....	.35	.95	.....	.....	.....	.....	.71	.....	.....	.....	.....	.02	.52	.04	.....	.....	.10	.02	.....	3.61
Elkhorn	Big Sandy	.08	T.	T.	.....	.55	.50	.....	.08	.....	.....	.....	T.	.....	.....	.....	.....	.....	*	*	*	*	.....	.....	.19	.....	.08	.....	.....	.06	.....	1.54
Elkins	Monongahela	T.	T.	.....	T.	T.	1.17	.....	.....	T.	T.	.....	.34	.01	.02	.12	.....	.06	.47	T.	.03	.04	.....	T.	.36	T.	.....	.....	.12	.01	T.	2.75
Fairmont [1]	....do	.04	.....	.....	.....	.....	.17	.64	.....	.....	T.	.....	.03	.38	.....	.....	.02	.....	.30	T.	.....	T.	.....	.....	.24	.04	T.	.....	.03	T.	T.	1.89
Glenville [1]	Little Kanawha	.....	.....	.....	.....	.....	.35	.64	.....	.....	.....	.....	.....	.67	.....	.....	.....	.....	.43	.....	.....	T.	.....	.05	.45	.05	.....	.....	.28	.....	.....	2.92
Grafton	Monongahela	.....	T.	.....	.....	.....	.96	.....	.....	.....	.....	.02	.30	.....	.....	.....	.....	.....	.....	.....	.....	T.	.....	.....	.53	.....	.....	.....	.10	T.	T.	2.92
Green Sulphur Springs.	Great Kanawha	.04	T.	.....	.....	.06	1.41	.....	.....	.04	.....	.....	.35	T.	.....	.07	.....	.....	.33	.12	T.	T.	.....	.....	.35	T.	.....	.....	.14	T.	.01	1.91
Hinton [1]	....do	.04	.....	.....	.....	.06	.64	.92	.....	.12	.....	.....	.....	.24	.....	.10	.....	.....	.34	T.	T.	.02	.02	.....	.24	.10	.....	.....	.08	.....	.04	2.92
Huntington [1]	Ohio	.....	.....	.....	.....	.....	.72	.52	.....	.....	.....	.....	.64	.34	.....	.....	.....	.....	.42	.....	.....	.....	T.	.....	.64	T.	.....	.....	.....	.....	.06	2.96
Lewisburg	Great Kanawha	.....	.....	.....	.....	.....	1.56	.....	.....	.15	.....	.....	.53	T.	.....	.....	.....	.....	.43	T.	.....	T.	.....	.....	T.	.....	.....	.....	.35	T.	.....	3.34
Logan	Guyandotte	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.02
Lost Creek	Monongahela	T.	T.	.....	.....	.....	.71	.....	.....	.....	.....	.....	.51	.....	.....	.....	.....	.....	.35	.....	T.	T.	.....	.....	.40	T.	.....	.....	.12	T.	.....	2.09
Madison	Great Kanawha	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mannington	....do	.....	.01	.....	.....	T.	.74	.....	.....	.....	.....	.24	.42	T.	.....	.....	.06	.....	.56	.....	.01	.02	.....	.....	.37	.01	.....	.....	.07	T.	.....	2.51
Marlinton	....do	.....	.....	.....	.....	.....	1.73	.....	.....	.15	.....	.....	.25	.....	.....	.17	.....	.....	.76	.....	.....	.07	.....	.....	.33	.....	.....	.....	.15	.05	.....	3.66
Morgantown	Monongahela	.....	.....	.....	.....	.....	.65	.....	.....	.....	.....	.33	.....	.....	.....	.....	.....	.....	.60	.....	.....	.....	.....	.....	.40	.....	.....	.....	.....	T.	.....	1.98
Moundsville	Ohio	.....	T.	.....	.....	.....	.68	.....	.....	.....	.....	.11	T.	T.	T.	.....	.....	.....	.60	.....	.02	T.	.....	.....	.33	T.	.....	.....	.07	T.	.....	1.81
New Cumberland	....do	.....	T.	.....	.....	.....	.80	.....	.....	T.	.....	.10	.60	.....	T.	.....	.....	T.	.40	.....	T.	.....	.....	.....	.50	T.	.....	.....	T.	T.	.....	2.40
New Martinsville	....do	.....	T.	.....	.....	.....	.70	.....	.....	.....	.....	.31	.88	T.	.....	.....	.....	.....	.60	.....	.....	.....	.....	.....	.50	.....	.....	.....	.13	T.	.....	2.12
Nuttallburg	Great Kanawha	.....	T.	.....	.....	.....	1.09	.....	.....	.....	.....	.....	.60	.....	.....	.....	.....	.....	.....	T.	.....	T.	.....	.....	.30	.....	.....	.....	.....	T.	.....	3.12
Parkersburg	Ohio	.....	.....	.....	T.	T.	.68	.....	.....	T.	.....	.19	.54	.....	T.	T.	.....	.57	.25	.....	T.	.01	.....	.34	.24	T.	.....	.....	.08	.01	.....	1.99
Parsons	Monongahela	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.91
Philippi	....do	.05	T.	.....	.02	.....	.91	.....	.....	.....	.02	.....	.45	.....	.....	T.	.....	.....	.65	.....	.02	T.	.....	.....	.57	.....	.....	.....	.10	.08	.....	2.87
Pickens	....do	.11	T.	.....	T.	.....	1.99	.....	.....	.....	.....	.....	.42	.27	.....	.24	.....	.....	.80	.....	.....	.80	.....	.....	.40	.....	.....	.....	.31	.20	.....	5.54
Pineville	Guyandotte	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Point Pleasant [1]	Ohio	.06	.....	.....	.....	.....	.38	.60	.....	.....	.02	.....	.34	.54	.....	.02	.....	.....	.80	.....	.....	.....	T.	.....	.68	.06	.....	.....	.06	.....	T.	3.56
Powellton	Great Kanawha	.....	.....	T.	.....	.10	1.55	.....	.....	.03	.....	.....	*	.....	.....	.60	.....	.....	.....	.....	.03	.01	.....	.....	.72	.....	.....	.....	.10	T.	.....	3.14
Princeton	....do	.....	.....	.....	.....	.75	1.40	.....	.15	.....	.....	.....	1.60	.....	.....	.....	.....	1.00	.....	.10	.10	.....	.....	.15	.10	.....	.....	.....	.....	.15	.....	5.50
Robertsburg [1]	....do	.....	.....	.....	.....	.....	.64	1.00	.....	.....	.....	.....	.30	.40	T.	.....	.....	.....	.60	.....	.....	.....	.....	.....	.40	.10	T.	.....	.15	.....	.....	3.59
Rowlesburg [1]	Monongahela	.10	.02	.....	.....	.....	.16	.94	.....	.....	.....	.....	.....	.54	.....	T.	.10	.....	.70	.02	.....	.08	.01	.....	.30	.37	.....	.....	.04	.04	.01	3.43
Ryan	Great Kanawha	T.	T.	.....	.01	.....	1.39	.....	.....	.....	.....	.....	.60	.....	.....	.02	.....	.....	.52	.....	.....	.03	.....	.02	.71	.....	.....	.....	.23	.01	.....	3.54
St Marys [1]	Ohio	.34	.....	.....	.....	.....	.32	.42	.....	.....	.....	.....	.33	.37	.....	.....	.....	.....	.75	.....	.....	.....	.....	.....	.64	.05	.....	.....	.....	.07	.....	3.29
Smithfield [1]	Fishing Creek	.21	.11	T.	.....	.....	.19	.56	.....	.....	.....	.....	.19	.36	.....	.....	.....	.....	.42	.....	.....	.04	.05	.....	.14	.20	T.	.....	.....	.17	.10	2.74
Spencer [1]	Little Kanawha	.06	T.	.....	.....	.27	.....	.90	.....	.....	.....	.....	.....	.10	.....	.....	.....	.....	.....	T.	T.	T.	.....	.....	T.	T.	.....	.....	.....	.20	T.	2.74
Sutton [1]	Great Kanawha	.....	T.	.....	.....	.....	1.13	.....	.....	.....	.....	.....	.70	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.10	T.	.....	.....	.....	.....	.....	.....	1.53
Terra Alta	Monongahela	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.93
Union	Great Kanawha	.....	.....	.....	.....	.....	.57	1.02	.....	.20	.....	.....	.....	.35	.....	.....	.....	.....	.50	T.	.....	.....	.....	.....	.17	.05	.....	.....	.20	.....	.....	3.06
Valley Fork	....do	.....	.....	.....	.....	1.00	.45	.80	.....	.....	.....	.....	.....	.....	.....	.65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.20	.....	.....	.....	3.10
Webster Springs	....do	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wellsburg	Ohio	.....	.05	.....	.....	.....	.67	.....	.....	.....	.....	.25	.28	.....	.20	.....	.....	.....	.38	.....	.04	.....	.....	T.	.50	.10	.....	.....	.03	T.	.....	2.50
Weston [1]	Monongahela	.08	T.	.04	.....	.....	.24	.74	.....	.....	.....	.....	.....	.36	.....	.06	.....	.....	.....	.26	.....	.04	T.	.....	.20	.....	.....	.....	.20	.04	.....	2.26
Wheeling [1]	Ohio	.05	.....	.....	.....	.....	.18	.48	.....	.....	T.	.....	.12	.60	.....	.10	T.	.....	.60	T.	.03	.03	T.	.....	.36	.10	T.	.....	.04	.02	T.	2.71
Williamson [1]	Big Sandy	.26	.....	.....	.....	.....	.52	.48	.....	.06	.....	.....	.04	.65	.....	T.	.....	.....	.86	T.	.....	.....	.....	.....	.50	T.	.....	.....	.16	T.	.08	3.58

TABLE 2.—*Daily precipitation for November, 1911. District No. 3*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Ohio.																																
Amesville	Ohio		T.				.88	T.		T.			.97	T.					.64			T.		.02	.58	T.			.08		T.	3.17
Bangorville	Muskingum	T.				.51			T.	.10	T.	.68	.05	.05	.07		.29	.22		.05			.15	.15				.12	.05		2.49
Bellefontaine	Great Miami						.59			T.	.27	.24	.67		.10		T.	.93	.13	T.		T.		.60	.13				.23	.06		3.95
Bladensburg	Muskingum						.95						.76		.08							T.	.09	.03					.15	.04		2.10
Cadiz	Ohio		T.				.70		T.	.05		.20	.50	.02	.08			.20	.29			T.		.03	.60	.04			.09	T.		2.90
Cambridge	Muskingum						.91		T.				.87		.10			T.	.51			T.		.21	.49	T.			T.			2.88
Camp Dennison	Ohio					1.32					T.		.70	T.	T.			.28	.33						.08				.20	T.		3.12
Canal Dover	Muskingum	T.				.70	.30			T.		.04	.70		.10	T.	.06		.40					T.	.28		.07		.14			2.87
Canton	....do		T.				.55			.01	.02	.03	.69		.04	.04		.35	.24			.03		.15	.12	.07			.05	.03		2.65
Cardington	Scioto																															
Chillicothe ‖	....do						.75		.47			.02	.58	.02					.71							.16		.04				2.75
Cincinnati	Ohio					.07	1.01						.81					.57						.22	.04			.07	.13			2.92
Circleville	Scioto					T.	.84			T.		T.	.90		T.			.05	.56			T.		.13	.17				.08	T.		2.73
Clarington	Ohio						.80				.05	.20	.75			T.	.10		.50			T.			.50	.02		.12		T.		3.06
Columbus	Scioto					.01	1.13			T.	T.	T.	.53		.11	.01		.41	T.		T.	.13		.17	.07	.01			.12	.01		2.71
Coshocton ‖	Muskingum						.50	.65		.02			.65	.02		.04			.50		.03	.03			.34	.04		.05	.04	.10		3.04
Dayton (1)	Great Miami				T.	.01	.61			.01		T.	.52		.05			.40	T.					.27	.13			.09	.12	.05		2.26
Dayton (2)	....do						.80			T.			.68			.06		.50						.36	.06							2.46
Delaware	Scioto	.01	T.				.35				.02		.34		.70	.10	.04	.01	.28	T.	.04	.02		T.	.24					T.		2.15
Demos	Ohio	T.					.76	.03	.01			.15	.38		.05	.06	.03	.60		.06	T.	T.	.05		.63	.50			.24	.03		3.58
Dennison	Muskingum						.74			T.		T.	.61	.09	.08			.03	.40		T.			T.	.39	.04			.05	T.		2.43
Frankfort	Scioto								.90				T.					.53						.20	.10				.20	T.		1.93
Garrettsville	Mahoning	T.	.16				.49	.32		T.	.07		.82		.13			.29	.40		.16	.14		.06	.26	T.			.11	.07		3.48
Granville	Muskingum						1.08			T.	T.		.85		.20	T.	T.	.10	.60		T.	T.		.15	.14	T.			.13	T.		3.25
Gratiot	....do						.88			.01	.01		.90	.02	.10	T.	.06	T.			T.			.35	.02				.16	.02		2.53
Green	Ohio						.88						T.	T.		.20			2.00			T.			T.				T.	T.		3.08
Green Hill	Muskingum	T.	.05				.70	T.		T.	.02	T.	.52	T.	.04	T.	T.	.15	T.	T.	.52	T.		.03	.28	.03			.08	.02		2.44
Greenville	Great Miami						.72				.01	T.	.61		.06			1.01						.46	.08				.29	.05		3.29
Hamilton ‖	....do							1.15						.64		.10			.43						.54				.20	.02		3.08
Haydenville	Ohio						.96					.05	.93					T.	.60			T.		.05	.22				.33	T.		3.14
Hillsboro	Scioto						1.25			T.		T.	.93		.16			.11	.79			T.		.06	.24				.15			3.69
Ironton	Ohio				T.		1.37					.07	.50		.08			.12	.66					.18	.23				.23	.05		3.49
Jacksonburg	Great Miami						.69			T.			1.05		.20			.46							.26		T.		.32			2.98
Kenton	Scioto						.37				.05		.30		.10	.10		.99	.11					.72	T.							2.74
Killbuck	Muskingum	T.					.80			T.	T.	T.	.90	T.	.09	.03	T.	.40	.48		.11	.04		.20	.10	.03			.20	.05		3.43
Lancaster	Ohio				T.		.81			T.		T.	.80		.04	T.		.10	.42		T.	T.		.18	.22				.12	T.		2.6
McConnelsville	Muskingum						.95			T.		.03	.99		T.	.01		.05	.84		T.	T.		.12	.68				T.	T.		3.67
Marietta	Ohio						.80	.19			.01	.23	.78						.63			.01		.05	.55				.08	T.		3.33
Marion	Scioto		T.	T.			.45						1.05		.15	.05		1.02		.01	T.			.50	.05					T.		3.28
Milfordton	Muskingum		T.				.57			T.			.79		.05	T.		.10			.10			.18	.12				.05	.03		1.99
Milligan	....do						.85	.07				.25	.95		T.	T.	.04	T.	.50						.10				.08			2.84
Millport	Ohio	.02					.70	.18	T.	T.	.02	T.	.28	.02	.04	.01		.03	.45		.13			T.	.28	T.			.05	.01		2.22
Nellie	Muskingum						.88						.65		.08				.50		.05			T.	.30				.20			2.66
New Alexandria	Ohio	T.	.10				1.00				.20	T.	.10	.20					.30		T.		T.		.20							2.10
New Berlin	Muskingum	T.	.05				.42			T.	.03		.73	.05	.05			.35	.40		.22			.05	.15	.05			.03	T.		2.58
New Waterford	Ohio		T.					.50			.10	T.		.18					.45			.40			1.00					.10		2.73
Ohio State University	Scioto						.93			T.		T.	.60		.09	.02		.21	.25		T.	T.		.13	.07	T.			.11	T.		2.41
Pataskala	Muskingum		T.				.93			.01			1.12	T.	.16	.04		.07	.49		T.	.01		.16	.21	.01			.15	.02		3.38
Peebles	Ohio						1.02					.01						.06	.61					.19	.41				.13			2.43
Philo (1)	Muskingum						.72				T.	.04	.45		.04		.02	T.	.35		T.	T.		T.	.34				.09	T.		2.05
Piqua ‖	Great Miami						.42	.32			.26		.58			.10		.10	.95					.10	.60	.15			.57	.12		4.27
Plattsburg	....do						.81			T.		T.	.63		.20	T.	T.		T.					.14	.20				.24	.05	T.	2.27
Portsmouth ‖	Ohio	.11					.74	.33					.64	.38		.05			.71				T.	.01	.42				.04	T.		3.43
Prospect ‖	Scioto																															
Rittman	Muskingum	.05	T.				.85		T.				1.02		.10			.45	.10		.10			.10	.05				.08	.10		3.00
Shenandoah	....do	.03					.31						.81		.12	T.		.70			.16	T.		.25	.06				.05	.04		2.53
Sidney	Great Miami						.50					.02	.62		.05	.05		.90	.16		.01			.65	.09				.21	.07		3.33
Somerset ‖	Muskingum		T.							.02			.98	T.	.15	T.		T.	.26	T.	T.	T.		.10	T.	T.			T.	T.		1.51
Springfield	Great Miami						.75				T.		.60		.09			.31	.13			T.		.25	.08				.16	.04		2.41
Summerfield	Ohio						.89			T.		.09	.79		T.			.10	.77		T.	.01		.01	.71	T.			.12	T.		3.49
Syracuse	....do																															
Thurman	....do						.67			T.			.65					T.	1.00		T.			T.	.40				.23	T.		2.97
Urbana	Great Miami						.44				.06	T.	.94		.08	.06		.30	.25		T.	.05		.25					.15	.08		2.66
Warren	Mahoning	.02	.07				.53			T.	.04	T.	.48		.25	T.		.18	.32	T.	.17	T.		.12	.12				.25	.06	T.	2.61
Waverly	Scioto		T.	T.			1.03				T.	T.	.61	T.	T.			.08	.69	T.		T.		.08	.32	.03	T.		.06	T.	T.	2.90
Waynesville	Great Miami						1.04					T.	.55		.05			.47						.20	T.				.20	T.		2.51
Wooster	Muskingum	.02	T.				.42	T.		T.			.81		.05	.02	T.	.55	T.		.25	T.		.13	.08				.12	.05		2.50
Youngstown ‖	Mahoning	T.	.03					.45			.04		.28	.20					.72		.25	.20			.12	.10				.15		2.74
Zanesville ‖	Muskingum			T.			.22	.47			T.	T.	.24	.05		.05			.37	T.		T.	T.		.25	T.			.02	T.		1.67
Indiana.																																
Anderson	W. Fork White						.77	T.		T.	T.	T.	.54		T.	T.		1.34	.01		T.			.32	T.				.27	.03		3.28
Attica ‖	Wabash						.42	.03				.37	.50			.10		.85	.26					.07					.45	.15		3.20
Bloomington ‖	W. Fork White						.82	.17			.02	T.	.10	T.		.02		.26	.47		T.			.19	.49	T.			.39	.02	T.	2.95
Bluffton ‖	Wabash					.03	.40			.03			.30	.30		.10	.05	.60	.64		.07	.02		.08	.23	.04			.25	.04		3.18
Butlerville	E. Fork White						1.87				.12		1.06		.06			.37						.68	.13				.47	.12		4.88
Cambridge City ‖	Whitewater						.42	.32			.02		.63	T.		.05	T.	.04	.85	T.	.02			.12	.52	T.			.41	T.	T.	3.40
Columbus ‖	E. Fork White						.76	.15			T.	.03	.56					.03	.21		.01			.10	.41				.38	.02		2.66
Connersville	Whitewater												1.09					.46						.55					.40			2.50
Crawfordsville	Wabash						.63			T.			.60		T.			1.50						T.	T.				.50	T.		3.23
Delphi ‖	....do						.33	.10			.04		1.00		T.	.12	.03	.61	.23		.01			T.	T.				.50	.16		3.13
Eminence	W. Fork White						.87			T.	T.		.65		T.			.90											.75	.05	T.	3.22
Evansville	Ohio				T.	.80	.77			T.		.81	.08		T.			.08	T.	.06			T.	.75	T.			.19	.10	.02		3.66
Farmersburg	Wabash						.88			T.			.50							T.				.18					.32			1.88
Farmland ‖	W. Fork White						.40				.05		.74					1.05			.06				.56				.28	.12		3.26
Greenfield	E. Fork White						.73			T.			.91		T.			.83						.18					.11	.05		2.81
Greensburg	....do		T.				1.15					.65	.05				.25							.60					.65	.05		3.40
Huntingburg	Wabash						1.52						.60					.47						.92					.55			4.06
Huntington	....do		.05				.70				.05		.80		.10			1.28	T.		.10	T.		.18	.05				.40	.10		3.81
Indianapolis	W. Fork White	T.				.05	.55			T.		.58	.05		T.			1.77	T.	T.				.30	T.			.04	.17	.03		3.54
Jeffersonville	Ohio				T.	.20	1.73			T.	T.	T.	.61		T.			.46		T.				.44	T.			.02	.23	T.	T.	3.69
Judyville	Wabash						.33			T.	.14	*	.74					1.00	T.	T.	.01			T.	T.				.40	.10		2.72
Kokomo	....do						.60				.61		.64		.09	T.		.90			T.			.13	T.				.24	.08	.15	3.44
Lafayette ‖	....do						.52				.06	.01	.77		.11			.94			.02			.10	T.				.45	.10		3.08
Laurel	Whitewater						.73	.09			.01					.53			.42					.27		.02			.02	.43		2.52
Logansport ‖	Wabash						.33	.16			.10	.05	1.14			.12		.70	.26		.09			.05	.09				.58	.10		3.77
Madison	Ohio						1.51				T.		.93		.03			.23						.46	T.				.41	T.		3.57
Marengo	....do					*	1.67					T.	.73		T.			.34	.04	.82				T.	T.	T.			.55			4.15
Marion ‖	Wabash		T.				.62				.05		.76		.10	.06		1.31			T.			.31					.50			3.71
Mauzy	E. Fork White						.63			T.		T.	.62		T.			.69	T.					.51	.05				.38	.10		2.98
Monticello ‖	Wabash					.02	.32	.04			.04		1.03		T.	T.		1.02	.02		.10			T.	T.				.52	T.		3.11
Moores Hill	Ohio						1.16			T.		T.	.52		.05			.20	.18					.24	.05				.29	.05		2.74
Mount Vernon ‖	....do						*	.92					.68			T.				.04				.48	.32				.22	T.		2.66

TABLE 2.—*Daily precipitation for November, 1911. District No. 3*—Continued.

Stations.	Watershed.	Day of month.																												Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Indiana—Contd.																														
Paoli	E. Fork White						1.08						.44		.02			.25		.01				.61	T.				.34	T.		2.75
Princeton	Wabash						1.17					.70					.52														3.32
Richmond	Whitewater					.08	.32			T.			.54		.02			.76	T.	T.				.61	.01			.10	.16	.02		2.62
Rochester	Wabash		.20				.38				.11	.01	1.03		.30	.20		1.41			T.			.14	T.				.52	.20		4.50
Rockville	....do						.46			T.	T.		.93		T.			.95		T.				.11	T.				.49	T.		2.94
Rome	Ohio					.02	2.13	T.			T.		.76					.33	.26	.04				.62	.04				.31	.03		4.54
Salamonia	Wabash																															
Salem	Ohio					T.	1.85			T.	T.	.03	1.00		.03			.45		T.				.70					.55	T.		4.61
Scottsburg	E. Fork White					T.	1.60				T.	T.	.67		.15		.28		T.			.45		.12					.24	T.		3.51
Seymour	....do						1.16			T.			1.03		T.			.33		T.				.55	.04				.44	.02		3.57
Shelbyville	....do						1.10				T.		.82					.51	.14					.60	.07				.36	.02		3.62
Shoals ‖	....do						.98						1.40		.10	T.			.55					.24	.36				.32	T.		3.95
Terre Haute	Wabash					T.	.72			.02	.02		.70					1.58						.12					.54	.10		3.80
Veedersburg	....do						.39			T.			.87		.05			.82	T.	T.	.01			.11					.50	.10		2.85
Vevay	Ohio						2.10						1.50		T.			.75						.80	T.				.75			5.90
Vincennes ‖	Wabash				T.		1.12	.10			T.	T.	.75	T.		T.		.40	.30		T.	T.		.25	.25	T.			.50	.15		3.82
Washington	W. Fork White					.19	1.14					T.	.55					.41		.02				.57					.26			3.14
Whitestown ‖	....do						.38	.22			T.	.01	.70		T.			.38	1.21	.03				.04	.18				.36	.05	.02	3.58
Winona Lake	Wabash	T.	.09				.45				.18		1.80	T.	.22	.25		1.28			.05			.10	.18				.60	.08		5.28
Worthington	W. Fork White						.81			T.	T.	.02	1.03		T.			.83		.02				.51	T.				.33	T.		3.55
Illinois.																														
Albion	Wabash						1.05						.68					.39		.11				.42					.27			2.92
Carmi	....do																															
Casey	....do					T.	.71			T.	T.		.85					1.37		T.				.13				T.	.42	.09		3.57
Charleston	....do					.24	.42			.02		.66	.02		T.			.98		T.			.02	.11	T.			.13	.24			2.84
Danville	....do						.43			T.	.04		.92		.05			1.19		T.	T.			.07	.03				.50	.13		3.36
Equality	Ohio					.05	1.19			T.	T.	T.	.72		T.			.15		.10	.05			.65				T.	.15			3.06
Fairfield	Wabash																															
Flora	....do					T.	1.15			T.	T.		.85		T.			.27		T.				.35	T.				.29			2.91
Golconda	Ohio				.40	.08	1.49						.72					.17		T.				.72					.42	T.		4.00
Hoopeston	Wabash						.38				.07		1.40		.07			.95		T.	.01			.05	.01				.49	.11		3.54
McLeansboro	Ohio					.28	.95						.84		.03			.30		.03				.47					.17			3.07
Metropolis	....do				.20	.65	.90					.53						.22		.11				.71	T.				T.			3.32
Montrose	Wabash																															
Mount Carmel ‖	....do						1.14	T.			.02		.66	T.		.04		.32	.12	.06	.04			.34	.18	T.			.26	.18		3.36
New Burnside	Ohio	T.				.14	.90			T.	T.	T.	T.					.80	T.	T.				.30	T.				T.	T.		2.14
Newton	Wabash																															
Olney	....do					.38	.47			.03	T.	.95			T.			.59		.02				.30	T.			T.	.29			3.03
Palestine	....do					T.	.98			T.		T.	.71		T.					.01				.26					.30	T.		2.26
Paris	....do						.65	.10					.25					.95	.35					.10	T.				.60	T.		3.00
Philo	....do					.10	.55			.08	T.	.12	.53		.05			.79		T.				.06	T.				.45	.09		2.82
Rantoul	....do						.50				.08		1.04		T.			1.15		T.				.07	T.				.35	.05		3.24
Rileyville	Ohio					.15	.90				T.		.20					.40						.75					.15	T.		2.55
Robinson	Wabash																															
Sumner	....do						1.02					.05						.50		.02				.50					.30			2.39
Tuscola	....do																															
Urbana	....do					.03	.34			T.	.03	.77	.07		T.		T.	1.05	T.	T.			T.	.02	T.			T.	.30	.22		2.83
Kentucky.																														
Alpha	Cumberland				T.		1.85		.10				.97					1.35		T.	T.			.65				.45	T.	T.	T.	5.37
Anchorage	Ohio					.10	1.70						.74		T.			.50						.45					.22			3.71
Bardstown	Salt					.23	2.23	.11		T.	T.	T.	.89						.83						.05				.76			5.12
Beattyville	Kentucky					.10	1.22	.46		.10			.20	.10	T.			1.44	.10						.56	.12			.12	.18	T.	4.70
Beaver Dam	Green					.32	2.10						.62						.85	.01				.06	.61				.46			5.03
Berea	Kentucky				.18		2.13		.03	.04		T.	1.10					1.00	T.					.34	.12	T.				.02	T.	4.96
Bowling Green	Cumberland					.05	2.25	.15		.05			.90						1.40						.50				.30			5.60
Burnside	....do	.06			T.	.04	.80	.56		.14			.88	.16					.88	.06		T.			.36				.18	T.		4.12
Calhoun	Green				.34	.11	2.23			T.	T.	T.	.70		T.			.67			T.			.58	.01				.42	T.		5.06
Catlettsburg	Big Sandy	.02				T.	.96	.72					.60	.46		.02			.78			T.	T.		.64	.04			.08	T.	T.	4.32
Earlington	Green				.08	.28	2.49						.76						.94					.34	.06				.39	T.	T.	5.34
Edmondton	....do					T.	1.59		.05	.02	.03		.98						1.25	.07				.35	.39				.28	T.		5.01
Eubank	Cumberland	.08				.02	1.00	.40		.05	.02		.75	.03					.98	T.					.50				.20	T.		4.03
Falmouth	Licking						1.20	.12					.90	T.					1.04						.30	T.			.15		T.	3.71
Farmers	....do					2.15	.40					T.	1.53		T.				.97					.02								5.07
Frankfort	Kentucky						.98	T.		.04	T.		2.36	T.		T.			.64		T.				.65	T.			11	T.	.09	4.87
Franklin	Green				.09	.07	2.05		T.				.90					1.80			T.			.70	T.			.42	T.	T.		6.03
Greensburg	....do	.01					2.00	.45		.03			.77	.14					1.31	.10					.60				.36	T.		5.77
High Bridge	Kentucky	T.				.12	1.80	.27					.82	.04					1.08						.57	T.			.10			4.80
Hopkinsville	Cumberland				.25		2.20		T.				.57					.50		.05				.50					.55	T.		4.62
Irvington	Ohio				T.	T.	1.95						.42		T.			.86						.76	T.					.33		4.32
Leitchfield	Green				.25	*	2.53						.77					.95											.33			4.83
Lexington	Kentucky				.03	.17	1.39			T.	T.	T.	.74		T.			.86						.38	.12			.07	.07	.01		3.84
Loretto	Salt				.18	T.	2.04		T.	T.										T.				.36	T.				T.			
Louisville	Ohio				T.	.33	1.79		T.	T.	T.	T.	.42		.01			.51		T.				.45	.01			.12	.15	T.		3.79
Marion	....do				.95	.35	.82			T.		T.	.69					.20						.82					T.	T.		3.83
Maysville	....do	T.				.04	.87	.58				.02	.78	.02					.70						.69	.03			.08	02	T.	3.83
Middlesboro	Cumberland	.24			.08		1.51		.15	.11			1.18						.60	.12					.48				.16			4.63
Mount Sterling	Licking	T.				.06	1.45	.67		T.	T.	T.	.92	.10	T.	T.			.85					T.	.63				.18	.12		4.98
Owensboro	Ohio					T.	2.15						.50						.25	.06				.30	.35				.63			4.24
Paducah	....do				.14	.46	2.00						.20					T.	.40	.10				.70	.26				.22			4.48
Paintsville	Big Sandy																															
Pikeville	....do	.20					.46	.24		T.			.56	.64					.80						.16						.08	3.14
Richmond	Kentucky					.10	2.20	.10					1.17						.88	.04					.68	T.			.15	T.		5.32
St. John	Salt					.35	2.25	.18	T.			T.	.85						.91						.40				.38			5.32
Scott	Licking				T.		1.17					T.	.79	T.	T.			.35	.37					.25	.08				.22	T.		3.23
Shelby City	Kentucky				.07		2.37		T.			.04	.62						1.05					.26	.23				.18			4.82
Shelbyville	Salt						1.44	.10						.61										.20	.40				.25			3.00
Taylorsville	....do				.02	T.	1.88			.01			.75		T.			.52	.40	T.				.26	.01				.35	T.		4.20
Williamsburg	Cumberland	.05			.03	.08	.20	1.47		.05			1.00						.70	.15					.50				.15			4.38
Williamstown	Licking	.16					1.10	.14			T.		.79						.57						.34	.03			.13		T.	3.26
Tennessee.																														
Ashwood	Tennessee				T.	T.	1.45		.35	T.			.50						.32					.20	T.			.05	.20	T.	T.	3.07
Benton	....do				.08	T.	.88		.56			.05	1.03						.70					1.23				.10	.10	T.		4.73
Birds Bridge ‖	....do	.13	.01			.08	.10	.62			.46			.52					.62	.03		.07			.38	T.			.07		.01	3.10
Bluff City ‖	....do					.03	.36	.83		.38				.50					.66	.09					.65	.10			.12			3.72
Byrdstown	Cumberland						1.40		.10				1.12						.90	.10				1.30				.34		T.		5.26
Carthage ‖	....do				.06		1.25	.04	.12	.22	.01	.01	.25					1.31						.35					.75	.06	.01	4.44
Cedar Hill	....do				.02	.07	2.30		.15	.04	T.	T.	.70					1.70		T.	T.			.65	.04			T.	.40	.02		6.09
Celina ‖	....do	.07			T.		1.37	.40		.20			.90						1.15	.12					.55				.31			5.07
Center Point	Tennessee				T.		1.35		.07	.20	T.	T.	.46						.60					.36	.50				.40	T.		3.94
Charleston ‖	....do	.76					.12	1.03	.02	.50	.10	.05	.25	.78					.70						.50				.30	T.	T.	5.11

TABLE 2.—*Daily precipitation for November, 1911. District No. 3*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Tennessee—Contd.																															
Chattanooga	Tennessee				.03	.01	1.34		.58	.03	.02	.07	.42					.86	.03					.27	.01			.45	.11			4.23
Clarksville	Cumberland				.02	.09	1.62		.06	.02			.48					1.45	.02	.03				.70	.03			.13	.27			4.92
Clinton ‖	Tennessee					.55	1.10		.45				.29	.58					.70									.27				3.94
Dandridge ‖	do	.18					.20	.90		.56				.60					.80						.90							4.14
Decatur	do	.02			.03	T.	1.32		.42	.15	.01	.01	.93						1.03					.13	.48	.02		T.	.45	T.		5.00
Dickson	Cumberland						2.41		.15				.70						.68					.63					.54			5.11
Dover	do				T.	T.	2.50	T.	T.	T.	T.	.82	T.					1.50						.77				.25	.30	T.		6.14
Dunlap	Tennessee				.05		1.14		.43	.07		.05	.98						1.08					1.38	.10			.02	.38	T.		5.68
Elizabethton ‖	do					T.	.02			.40	T.			.84					.16	T.	T.	.04			.41							1.87
Erasmus	Cumberland				T.		1.44		.56	T.	T.	T.	1.06			T.		T.	.86		T.			.24	.22			.12	.22	T.	T.	4.72
Florence	do					T.	1.62		.27				1.10						.34					.28	.07				.47	T.		4.15
Franklin	do				T.	T.	1.98		.26			.10	.95						.37					.89					.39	T.		4.94
Halls Hill ‖	do	T.					1.28	.33		.30			.90	T.					.83						.50				.29		T.	4.43
Harriman	Tennessee	.12			T.		1.50		.54	.05			1.10						.83					*	.68				.27	T.		5.09
Hohenwald	do				.12		2.10		.38			.15	.80					.37	.53					.60				.20	.41			5.66
Iron City	do					T.	1.50		T.			.14	.39					T.						.41				.10				2.54
Jefferson City	do	.19			.05		.99		.46	.21			.54						.60						.96				.12	T.		4.12
Johnson City ‖	do	T.				.20	.05	.83		.38				.47		.03			.50	.04		.02			.45	.03			.06		T.	3.06
Johnsonville	do				.02	.02	2.56		.11	.01	T.	T.	.76					1.11	.04					.74	.01			T.	.50	T.		5.88
Kingston ‖	do	.06					.55	.99		.60	T.		.74	.41					.90						.66				.24	T.	T.	5.15
Knoxville	do				.03	T.	1.07		.60	T.		T.	.83					.58	.13	T.			.60	.39			.10	.04	T.		4.37
Lebanon	Cumberland				.04	T.	2.00		.35	.03		T.	.82					T.	.48					.44	.03			T.	.46	T.		4.65
Lewisburg	Tennessee				T.	.02	1.32		.48	.01		.01	1.00					.58	.05					.35	.03			.36	.12	.01		4.34
Livingston	Cumberland																															
Loudon ‖	Tennessee					T.	.18	1.03		.58		T.	.37	.52					1.02						.71				.15			4.56
Lynnville	do						1.29		.48	T.			.76			T.		.37						.36	T.			.08	.50	T.		3.84
McGhee ‖	do	.02			T.		.18	.70		.48	T.	T.	.48	.52					.75						.88	T.			.23	T.		4.24
McMinnville	Cumberland				T.	T.	1.35		.47	.01	T.	T.	1.47					T.	.95					.25	.27			T	.40	.02	T.	5.19
Maryville	Tennessee				.12		1.12		.35	.22			.99						.95					T.	1.12				.08			4.85
Mountain City	do						1.23		.17				.63						.08	.12					.48						T.	2.71
Nashville	Cumberland			T.	.06	.31	1.57		.18	T.		.02	.82					.70						.52	T.			.12	.08	T.		4.38
Newport ‖	Tennessee	.14	.02				.22	.68		.47				.68		T.			.62			.09		.45	.10							3.47
New River ‖	Cumberland						.90	.87		.43			.62						.31	T.					.22					T.	T.	3.35
Palmetto	Tennessee				.03		5.33		.43	.02	T.		.94					T.	.62					.30	T.			.09	.30	T.		4.06
Pinewood	do				T.	T.	2.34						*						1.52					.59				T.	.30	T.		4.75
Pope	do																															
Rogersville ‖	do	.17			.05		.36	.87		.48	.01			.43		.04			.69	.04		.01			.90	.06			.09			4.20
Rugby	Cumberland				T.	T.	1.52		.35	.05			1.00					.05	.46	T.				.40	.05				.22	.05	.05	4.20
Savannah	Tennessee																															
Sevierville	do	.04			.06	.02	.95	.02	.36	.17			.50						.81						.90				.17			4.00
Sewanee	do										1.59		.20				.71							.89				.16		.05		2.80
Sparta	Cumberland				*	*				*									2.00					.30	.05			T.	.50	.02		2.87
Springville	Tennessee				.06	.02	1.76		.06	.04			.80					1.77	.11					.76	.07			T.	T.	T.		5.45
Tazewell	do	.23				T.	.53	.71		.28			.45	.55					.61	.10					.55	T.			.12	T.	T.	4.13
Tullahoma	do					T.	1.12		.58	.04		T.	1.20						.47					.30	.13			.02	.66	T.		4.52
Walling ‖	Cumberland						.20	1.00		.40									.98						.40				.22			3.20
Waynesboro	Tennessee				T.	T.	1.69		.40	.04		.05	.93					.50						.45				.39	.11	T.		4.56
Wildersville	do						1.60		.13	T.			.50					.65	.05					.75				.30	.45	T.		4.43
Worsham	Cumberland						1.95			.14			.80					1.12							.55				.54	T.		5.10
Yukon	Tennessee				T.		1.16		.60	.04			1.15											1.07				T.	.85	T.		4.87
Alabama.																															
Bridgeport ‖	Tennessee						.70	.49	.05	.46	.01	.01	.57	.25		T.			.74						.43				.68		T.	4.39
Decatur ‖	do						.80	.19	.08	.42	.03	.04	.77						.25						.30				.74	T.	T.	3.62
Florence ‖	do						1.00	T.	.28	.58			.67						.33						.50				.70	T.		4.06
Guntersville ‖	do	T.					.22	.56	.12	.82		.06	.50	.18					.90						.24				.66		T.	4.26
Madison	do						.70		T.	.48									.61						.51				.71			3.01
Riverton ‖	do						1.34		.20	.46		T.	.58						.66					.04	.41				.76	T.		4.45
Scottsboro ‖	do				T.		1.00		.52	.10	.15		.50						.52					.05	.18			.05	.55	T.		3.62
Tuscumbia ‖	do						.62	.11	.14	.56			.26						.56						.52				.23			3.00
Georgia.																															
Diamond	Tennessee				.03		1.03		.52	.80		T.	.58						.78					.02	.38			T.	.74	T.		4.88
Mineral Bluff	do				.05		.13		.55				1.22						.94					.02	.35			.18		T.	T.	3.44
North Carolina.																															
Altapass	Tennessee																															
Andrews	do	.02			.08	.03	1.13		.59	.38		.18	.69						1.10						.51				.16	T.		4.87
Asheville	do				.06		.61	.01	.57	.02		T.	.37		T.	T.		T.	.32	T.	T.			.03	.03			T.	.18	T.	T.	2.20
Banners Elk	do				T.	.12	1.07		.50				.50						.62	.12		.06		T.	.35				.32	T.		3.66
Brevard	do							.51	1.50				.70						.90						.40			.95				4.96
Bryson City ‖	do					.09	.17	.94		.80	.13		.20	.46					.99						.42		.02					4.22
Cullowhee	do				.20	T.	.91		.50	.33		T.	.48					.04	.52						.31				.05			3.43
Eagles Nest	do																															
Hendersonville	do	.01			.10	.02	.45	.01	.97	.02	.02		.50						.56						.30				.92			3.88
Highlands	do																															
Hot Springs	do	.05					.90		.35	.17			.38						.44			.06			.12					.05		2.52
Jefferson	Great Kanawha					.08	1.22		1.35	.31			.30							T.					.70	T.			.20	T.	T.	4.16
Marshall	Tennessee				T.		.86		.57	.04			.52						.60						T.							2.59
Murphy ‖	do	.01				.09	.03	1.14	.01	1.00			.06	.82					.87						.39	.01			.05	T.	T.	4.48
Rock House	Savannah																															
Waynesville ‖	Tennessee					.07	.05	1.04		.84	.03	.02		.64					.65						.47	T.			.07		T.	3.88
Virginia.																															
Big Stone Gap	Tennessee	.17			T.		1.43		.20				.73					1.04		.05	T.			T.	.10				.90	T.		4.62
Blacksburg	Kanawha				T.		1.15		.07	.52			.32		T.	.10			.31	T.		T.		T.	.17				.08	T.		2.72
Burkes Garden	Tennessee	T.					1.08		T.	.35	.45		.40	T.		.05			.52	T.		T.			.35	T.			.30		T.	3.60
Elk Knob	do	.13			.07		1.10		.23	.07	T.		.70						.80	.09		T.			.47				.18		T.	3.84
Ivanhoe ‖	Kanawha					.08	.25	.45		.43	.01	T.	.03	.26		.02			.15	.05	.01	.14			.20	.07			.09	.05		2.29
Lebanon	Tennessee					T.	.82		.08				.25							.20					.62				.20			2.67
Marion	do																															
Max Meadows	Kanawha			T.		T.	T.	.92		.48	.12			.21						.25		.05			T.			.15		T.		2.18
Mendota ‖	Tennessee					.10	.15	.90		1.35				.50		.10				.74					.60	.30				.08	T.	3.82
Mountain Lake	Kanawha						1.20			.40			.30			T.				.04					.20							2.14
Radford ‖	do						.24	.60		.63				.13					.20						.10				T.	T.		1.97
Speers Ferry	Tennessee																															
Wytheville	Kanawha				.02		.94		.38	.10			.15		.02				.16	.06	.04			.10	.04				.09	T.		2.10

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1911. District No. 3, Ohio Valley.*

Date.	Pennsylvania.				West Virginia.														Ohio.							
	Greenville.		Pittsburgh.		Charleston.		Elkhorn.		Elkins.		Glenville.		Huntington.§§		Morgantown.		Parkersburg.		Wheeling.§§		Canton.		Cincinnati.		Columbus.		Dayton.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	49	38	48	41	58	48	60	45	50	43	62	46	55	46	54	44	54	40	53	46	57	40	51	31	51	33	48	28
2....	45	27	41	29	55	31	51	30	43	21	50	18	40	31	46	28	40	29	45	32	46	30	40	27	36	28	36	26
3....	45	24	41	27	47	24	48	19	44	15	55	27	44	22	42	20	43	22	48	21	50	27	43	27	41	24	41	24
4....	48	26	52	34	56	35	51	33	52	27	57	40	50	26	53	29	50	34	58	23	49	34	47	38	46	35	45	36
5....	49	31	52	40	59	42	62	38	56	39	58	42	55	42	54	39	55	41	59	37	55	40	53	40	53	40	53	40
6....	53	32	59	45	63	46	60	44	59	47	59	40	61	45	55	47	60	45	56	40	57	43	67	47	61	44	63	46
7....	56	42	59	43	65	48	60	42	59	38	61	45	59	49	59	45	58	42	53	38	57	42	56	44	51	41	50	40
8....	43	32	46	40	62	36	55	33	44	32	51	31	48	35	45	32	46	34	48	34	49	37	49	39	46	37	48	37
9....	48	26	50	39	72	44	53	41	55	41	62	39	58	37	52	40	56	42	56	34	52	34	56	40	54	36	54	36
10....	63	42	63	49	75	45	62	40	64	38	68	45	67	44	64	49	68	51	69	41	70	42	67	54	66	53	66	53
11....	72	40	69	50	79	45	64	42	75	32	78	37	68	44	73	23	72	45	70	42	67	49	71	57	70	52	69	57
12....	67	19	69	17	78	28	75	32	68	16	75	27	45	45	.....	.....	71	20	56	42	69	18	70	17	70	16	68	15
13....	26	13	22	13	32	16	48	10	23	10	27	14	29	17	26	12	26	15	29	13	26	13	29	15	25	14	25	13
14....	33	16	36	19	49	24	43	9	40	14	38	18	43	18	48	16	44	20	42	13	34	21	41	25	34	24	34	25
15....	41	26	43	32	56	41	54	30	47	37	52	35	50	28	43	27	50	35	49	24	45	30	53	31	43	28	46	28
16....	34	23	34	26	55	32	53	40	39	24	50	28	55	32	.....	.....	39	28	56	26	42	26	44	29	35	25	40	24
17....	41	23	54	29	69	32	63	32	54	21	59	34	65	31	55	26	56	32	45	27	53	30	64	36	57	32	57	34
18....	50	32	54	33	69	37	.....	.....	56	33	61	36	50	38	57	33	56	36	43	29	53	33	43	34	40	32	40	32
19....	34	28	34	29	51	35	.....	.....	37	30	47	34	45	34	41	32	42	34	40	30	40	29	42	32	37	28	38	27
20....	41	25	42	31	54	36	.....	.....	46	30	50	30	51	35	43	29	47	34	45	27	41	31	46	32	41	31	40	31
21....	39	29	34	38	50	34	.....	.....	30	25	48	31	38	33	48	29	35	28	37	29	38	27	38	30	35	30	36	30
22....	38	28	37	38	46	26	62	20	47	18	42	18	42	25	42	23	42	23	41	23	41	26	43	27	39	28	40	27
23....	30	31	52	35	63	35	55	32	57	25	56	32	53	26	54	30	54	34	58	27	46	32	45	30	45	33	40	29
24....	38	29	42	27	62	29	55	22	50	24	52	29	32	30	51	28	42	29	34	33	40	30	31	27	33	28	32	26
25....	34	24	33	24	40	27	35	20	33	22	35	29	50	27	.....	.....	36	27	36	26	36	25	41	24	35	25	37	23
26....	41	29	43	33	54	30	55	20	48	28	52	26	50	27	49	24	51	34	50	25	48	32	56	35	47	33	49	31
27....	54	25	55	39	66	32	59	23	52	22	52	26	54	29	54	37	52	36	56	27	57	36	55	38	50	37	52	38
28....	42	29	60	34	66	46	61	28	58	34	63	36	55	30	62	45	61	32	59	28	52	34	49	28	50	29	47	26
29....	35	20	34	26	48	27	59	19	34	22	48	26	31	27	46	25	32	26	30	28	36	24	28	23	29	23	26	21
30....	33	16	33	25	51	24	34	17	35	21	36	25	38	25	33	24	36	25	37	24	36	20	39	21	36	21	36	19
Mns..	44.4	27.5	46.4	32.2	58.3	34.5	55.3[d]	29.3[d]	48.5	27.6	53.5	31.5	49.4	32.6	50.0[e]	31.0[e]	49.1	32.4	48.6	29.6	48.1	31.2	48.6	32.6	45.2	31.3	45.2	30.7

Date.	Ohio.				Indiana.										Philo, Ills.		Kentucky.									
	Marion.		Waverly.		Butlerville.		Evansville.		Indianapolis.		Kokomo.		Rockville.		Worthington.				Beattyville.§§		Bowling Green.§§		Earlington.§§		Greensburg.§§		Lexington.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	55	31	57	40	52	39	50	30	47	26	46	31	47	30	49	36	44	29	64	40	57	41	51	35	60	39	53	35
2....	50	25	47	27	42	22	38	25	37	22	37	21	37	20	40	22	35	20	44	25	44	24	43	25	40	24	38	24
3....	46	21	45	19	45	18	42	27	39	24	39	18	35	19	41	19	37	19	55	16	49	23	41	21	60	19	42	24
4....	47	29	49	34	47	33	43	38	45	36	45	29	41	34	46	36	47	32	48	22	49	34	44	30	48	19	43	37
5....	56	37	55	39	54	37	54	42	51	39	52	37	47	39	51	39	49	39	66	37	59	40	58	36	58	35	55	40
6....	59	41	65	44	66	46	67	50	60	46	62	44	48	44	63	46	57	43	68	40	72	45	71	45	71	40	66	47
7....	58	43	61	45	56	40	58	45	50	40	52	40	48	38	53	36	50	35	64	35	60	43	60	34	60	40	56	42
8....	46	32	47	32	55	34	54	43	48	38	49	30	50	34	51	35	50	31	49	31	50	39	53	36	49	34	47	39
9....	51	30	57	38	52	36	57	41	54	36	55	30	50	33	51	32	51	32	58	34	57	42	62	42	59	36	54	43
10....	67	47	70	52	66	40	64	57	66	54	66	47	62	49	63	51	62	42	73	41	65	45	69	47	68	44	64	53
11....	66	57	73	41	76	58	75	40	73	51	74	55	75	60	75	61	74	50	73	38	75	55	76	61	69	45	71	56
12....	67	19	72	21	74	17	40	17	51	14	70	13	66	13	72	16	50	13	34	30	32	22	29	21	32	30	70	14
13....	40	10	30	13	28	12	30	17	28	12	25	9	40	9	29	12	27	11	38	13	32	13	36	14	33	11	28	13
14....	30	19	35	20	36	21	48	30	39	25	31	20	44	23	42	25	37	24	52	15	52	22	50	18	53	11	49	25
15....	42	25	53	28	52	30	62	35	43	26	34	29	39	26	51	28	37	25	64	26	63	30	65	32	62	27	56	33
16....	38	16	48	23	47	22	51	30	42	25	38	12	39	21	46	23	42	22	55	24	62	29	63	29	57	27	48	28
17....	45	29	60	30	60	36	63	36	56	32	54	32	39	34	58	40	57	32	72	23	69	39	65	51	72	27	67	38
18....	54	31	57	34	55	29	45	33	40	30	42	28	35	29	43	30	38	29	53	32	70	30	52	30	52	31	46	30
19....	37	26	44	29	42	28	44	35	39	26	36	21	36	25	41	27	36	24	44	29	70	30	51	34	49	31	41	32
20....	38	30	49	34	48	33	47	36	40	27	37	29	36	25	45	33	36	27	52	27	54	30	52	35	52	32	47	30
21....	35	28	38	31	46	28	46	31	35	26	36	24	37	25	39	22	36	24	32	27	47	25	51	23	43	23	31	25
22....	42	22	43	20	47	26	52	30	40	27	40	21	45	26	47	26	41	27	49	15	54	22	53	28	50	19	43	24
23....	40	20	52	26	41	34	48	28	41	25	39	27	42	25	44	29	40	25	55	18	46	38	44	42	50	19	48	31
24....	37	27	44	29	35	24	31	25	28	22	29	21	27	21	30	23	30	21	29	23	29	25	28	27	29	24	31	24
25....	36	24	37	25	40	20	45	24	39	22	38	20	32	21	40	21	43	24	52	22	44	18	47	21	44	17	37	20
26....	49	31	53	29	46	35	56	34	52	32	49	30	42	29	53	29	50	29	61	18	60	25	61	24	59	17	54	31
27....	49	31	46	24	56	30	51	39	50	36	55	35	46	36	52	34	53	33	55	20	58	30	54	38	55	24	52	38
28....	35	24	50	30	48	30	45	23	46	22	44	29	46	21	50	26	41	21	51	20	45	41	38	36	46	33	49	24
29....	36	23	36	25	30	20	24	20	25	17	31	20	23	16	26	18	22	14	27	22	27	20	24	19	24	22	24	20
30....	35	16	38	23	40	18	41	20	34	16	32	13	34	14	37	16	33	13	43	19	39	18	43	18	40	17	35	19
Mns..	46.2	28.1	50.4	30.2	49.3	29.9	49.0	32.7	44.6	29.1	44.6	27.2	42.9	28.0	47.6	29.7	43.5	27.0	52.7	26.1	53.0	31.3	51.1	31.7	51.5	27.2	48.2	31.3

TABLE 3.—*Maximum and minimum temperatures at selected stations, November, 1911. District No. 3*—Continued.

Date.	Kentucky.						Tennessee.														Decatur, Ala.§§		Asheville, N. C.		Virginia.			
	Louisville.		Maysville.§§		Williamsburg.§§		Chattanooga.		Johnson City.§§		Knoxville.		Nashville.		Palmetto.		Sparta.		Waynesboro.						Big Stone Gap.		Wytheville.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	50	34	59	45	57	31	64	46	58	50	58	45	58	40	61	38	59	45	59	40	63	46	55	41	60	49	54	38
2....	40	26	44	27	50	33	46	35	41	40	45	30	44	26	44	28	51	27	49	27	60	43	45	25	51	33	42	27
3....	44	27	50	19	57	20	45	32	51	20	44	29	49	29	50	28	51	30	50	28	57	30	46	21	51	24	45	18
4....	45	41	48	20	59	33	44	38	52	22	50	35	47	40	63	37	53	34	51	37	53	31	46	32	53	33	50	28
5....	57	42	60	38	60	34	54	42	66	36	62	41	59	43	66	43	70	44	66	36	63	31	63	43	64	41	60	35
6....	69	50	70	42	65	40	66	52	58	39	65	50	76	52	77	54	73	53	76	53	76	40	56	46	56	49	55	45
7....	59	45	62	46	59	41	66	52	66	49	67	50	61	50	63	45	63	41	63	43	63	49	64	45	65	38	61	40
8....	52	42	48	33	63	38	52	45	48	39	50	45	51	45	50	45	52	40	51	45	52	48	50	39	56	36	47	36
9....	57	42	56	34	65	39	54	45	65	40	54	46	57	46	55	47	56	45	55	47	57	48	54	39	55	43	45	37
10....	65	57	67	43	70	41	61	52	63	43	66	51	66	57	70	55	69	39	71	55	71	53	68	45	61	52	58	39
11....	74	59	75	45	40	35	68	55	77	40	69	54	74	58	72	60	66	55	72	62	73	57	70	42	66	41	73	34
12....	74	20	32	31	38	25	73	24	71	43	72	22	73	21	70	30	72	28	74	26	38	34	67	19	69	30	67	17
13....	30	17	33	13	65	15	37	18	35	12	34	17	33	18	35	22	45	16	36	17	38	20	40	13	35	15	52	13
14....	48	28	44	14	70	25	49	31	56	17	55	29	53	29	55	27	54	28	53	29	57	20	47	28	49	26	39	21
15....	57	33	58	27	69	42	66	38	58	33	63	39	65	44	67	35	.....	.....	67	35	65	31	59	39	60	45	55	35
16....	49	30	51	25	65	29	68	40	63	36	64	40	66	38	74	32	.....	.....	71	31	70	34	65	39	60	31	57	32
17....	65	37	67	24	55	33	66	42	67	35	70	40	70	42	71	50	72	.....	70	49	75	33	60	39	66	31	59	32
18....	46	33	49	34	57	33	58	39	52	40	55	39	56	31	57	32	.....	.....	63	30	58	35	57	38	35	34	50	37
19....	45	36	45	30	55	34	60	45	43	34	52	40	54	37	65	32	.....	29	60	33	63	34	47	32	48	35	39	31
20....	48	34	48	34	58	32	66	45	57	31	62	41	56	39	65	33	62	32	66	41	67	33	63	26	56	40	52	26
21....	38	29	38	29	56	40	51	33	44	32	46	31	49	31	49	28	58	28	51	29	52	33	39	29	42	32	36	27
22....	45	27	49	23	46	39	52	30	48	22	48	28	54	28	56	26	55	23	55	27	59	29	45	23	44	21	41	19
23....	45	30	50	23	50	15	48	39	55	22	46	30	48	30	50	32	51	40	50	40	48	34	47	28	50	28	50	27
24....	30	25	31	27	53	19	47	27	35	23	46	26	30	24	35	25	48	25	43	25	33	30	47	20	48	25	46	23
25....	43	24	40	22	57	20	48	24	34	24	42	24	48	22	47	18	44	18	50	16	60	21	42	19	37	22	33	20
26....	58	36	57	22	58	40	59	28	40	22	55	30	58	37	59	27	57	21	60	27	62	20	52	29	48	19	46	27
27....	55	40	57	26	56	38	50	32	61	24	52	31	57	38	57	39	58	25	53	36	55	22	57	24	56	25	54	22
28....	49	27	51	27	43	37	54	32	62	28	52	32	51	26	45	31	55	34	52	30	42	30	58	32	57	42	56	37
29....	27	23	29	25	40	31	32	23	29	28	32	24	26	21	31	22	34	22	32	22	27	22	32	19	44	25	37	20
30....	40	—[a]	40	21	56	21	40	21	35	19	36	21	42	20	41	18	39	20	43	14	37	19	37	17	26	23	27	18
Mns..	50.1	33.9	50.3	28.9	56.4	31.8	54.8	36.8	53.0	31.4	53.7	35.3	54.4	35.4	56.7	34.6	56.4[d]	32.4[d]	57.1	34.3	56.5	33.7	52.6	31.0	52.3	32.9	49.8	28.7

a, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1911.

DISTRICT No. 4, THE LAKE REGION.

Prof. HENRY J. COX, District Editor.

GENERAL SUMMARY.

Within the Lake region November, 1911, was one of the stormiest and most disagreeable months of that name on record. Most of the atmospheric disturbances which swept the district during the month were accompanied by high winds dangerous to navigation, and, with the persistent rain or snow, interfered much with communication of all kinds. Several of these storms were of exceptional character, and the periods of their passage marked the times of the most pronounced temperature changes, the greatest precipitation, and the heaviest blows. Destructive thunderstorms of tornadic type occurred in several localities, doing much damage to buildings and trees, injury to persons, and in some cases occasioned loss of life. These conditions, together with the low temperatures that prevailed during most of the intervals, rendered outdoor work difficult, especially throughout the second and third decades, and in northern Indiana and northern Ohio prevented the harvesting of much of the corn that remained on the stalk. In the latter section there was a considerable loss of potatoes and sugar beets as well.

The degree of cloudiness over the district was remarkable, even for November. The mean values for the district show ordinarily from 30 to 45 per cent of the amounts of sunshine possible, yet throughout most of lower Michigan, the eastern portion of Wisconsin, the region along the southern shore of Lake Erie, and that east of Lake Ontario, the actual amounts of sunshine received during the month were from 10 to 13 per cent lower. No regular Weather Bureau station within this area reported more than 3 clear days nor less than 20 cloudy days.

The following table summarizes the chief features of meteorological interest in the various portions of the district:

	Mean temperature.	Departure from normal.	Mean precipitation.	Departure from normal.	Greatest 24-hour precipitation.	Mean snowfall.	Mean number of days.				Prevailing wind direction.
							Precipitation.	Clear.	Partly cloudy.	Cloudy.	
Minnesota	20.4	−6.9	1.54	+0.41	0.61	12.4	8	10	11	9	w.
Wisconsin	28.7	−5.2	2.99	+1.08	1.68	11.1	9	8	8	14	w.
Illinois	35.4	−3.8	3.27	+0.77	1.51	1.2	14	5	14	11	w.
Indiana	34.9	−5.3	3.16	+0.97	1.75	7.7	11	9	8	13	sw.
Upper Michigan	27.5	−4.0	3.90	+1.41	1.92	26.7	12	6	7	17	nw.
Lower Michigan	34.0	−2.7	3.53	+1.00	2.18	9.6	11	5	8	17	sw.
Ohio	36.6	−3.4	3.13	+0.51	1.35	5.6	11	6	9	15	sw.
Pennsylvania	38.0	−3.1	3.14	−0.47	0.88	12.2	19	1	6	23	sw.
New York	33.7	−2.4	2.65	−0.43	1.75	11.5	13	5	8	17	w.
Vermont	33.3	−0.9	2.17	−1.01	0.61	6.8	12	4	8	18	s.

TEMPERATURE.

The mean temperatures of the month were below the normal throughout the entire district, decreasing from near seasonal values in the Champlain Valley to averages showing departures of more than −6° in the extreme northwestern sections, where the month was one of the coldest Novembers on record. This distribution of temperature was due mainly to the course of the various pressure areas. As a rule, the areas of high atmospheric pressure passed to the southward of the Lake region, losing influence in their progress from west to east, while most of the depressions traversed the path across Lake Michigan to the St. Lawrence, leaving the Lake Superior sections entirely within the sweep of north to northwest winds.

Cool weather was general at the opening of the month and temperatures below normal continued until the 5th. On this date, under the influence of an atmospheric depression which approached from the west, the temperature rose above the normal and remained so until the opening of the second decade. On the 10th–11th the passage of a trough-like storm caused high southerly winds which sent the temperature up to the maximum readings for the month of 70° to 79° in all portions of the district except the extreme northwest and extreme east. With the shift of the wind to northwest, following the passage of the storm, the temperature fell as rapidly as it had risen, and within 24 hours the drop was at many places between 55° and 60°, causing one of the severest November cold waves of recent years. At most stations from upper Michigan to Ohio the extreme range of the month occurred during this time. In New York and Vermont, however, the lowest temperatures were not experienced until the 17th, while in the region around the western end of Lake Superior the highest readings occurred on the 7th–8th.

After the passage of the storm referred to above, cool weather was general practically until the end of the month, although two or three warm days occurred in various portions of the district in advance of the storms of the 16th–18th and 26th–28th.

The mean daily range in temperature was very small for November, averaging less than 12° over the middle sections of the district, and generally less than 15° elsewhere in the Lake Region. The high wind movement of the month and the excessive cloudiness, which resulted in a material lessening of daytime heating and nocturnal radiation, explain in a large measure the reason of the comparatively small limits of temperature oscillation, notwithstanding the wide ranges recorded in several particular cases. The absolute range for the district as a whole was 95°, from 79° at Howe, Ind., on the 11th, to −16° at Stephens Mine, Minn., on the 16th.

PRECIPITATION.

Precipitation was frequent—almost continuous—during November, with the exception of the 2d–5th. In fact there was no day in the entire period on which precipitation did not fall at a number of stations in the district, and the average number of days with rain or snow ranged generally from 15 to 20. While the month was practically one long, rainy period, yet as a rule the individual falls were light, and no instances of 24-hour falls exceeding 2 inches were reported, except in lower Michigan, where at five stations from 2 to 2.18 inches occurred. However, precipitation was decidedly more pronounced on the 6th, 11th–12th, 17th, and 28th, in connection with the storms mentioned elsewhere.

Over the sections lying to the west of the Pennsylvania portion of the district, the total precipitation was in excess of the normal, the departures reaching +2 inches in the northern counties of lower Michigan and in some portions of upper Michigan. In the northern Adirondacks also an excess of precipitation was received; but generally throughout the remainder of New York State lying in District No. 4 and the Champlain watershed, notwithstanding the frequency of rain or snow, there was a deficiency, reaching 1 inch along the southern and eastern borders of the district.

Snow.—Owing to the prevailing low temperatures during the month, a far larger proportion of the precipitation fell as snow than is usual for November. In most localities from Ohio westward the fall was the greatest on record for this month of the year, and it was exceptionally heavy in many portions of the eastern sections. The total depths ranged from 3 inches or less on the southern and southwestern boundary to more than 40 inches in upper Michigan and the highlands of New York. There was in many places considerable irregularity in the distribution of the snowfall. At Carvers Falls, N. Y., near the southern end of Lake George, no snow fell during the entire month, while at Nehasane, in the Adirondack region of the same State, the amount recorded was 47.3 inches. On the night of the 2d an unprecedented fall of 18 inches occurred at South Bend, Ind., although there was but little or none at any of the surrounding stations on that date.

At the end of the month from 10 to 30 inches lay on the ground in the interior of upper Michigan, and from 5 to 10 inches over the remainder of the Lake Superior region and in the highlands of lower Michigan. Sleighing was continuous at Duluth, Minn., after the 14th, and at Alpena, Mich., after the 23d. The depths decreased rapidly to the southward, however, and the ground was bare over the southern portions of the Lake Region at the close of the period.

SEVERE STORMS.

As stated above, several of the storms of the month were of exceptional severity.

First decade.—The storm of the 1st–2d occurred in advance of a large area of high pressure which moved down the Missouri Valley, and was caused primarily by an apparent redevelopment in the middle Lake Region of a depression that had traversed that section on the previous day. The storm affected chiefly the northern portions of the State of Michigan, and was accompanied by high northwest winds, driving snows, and temperatures from 10° to 16° below the normal. Vessels at many ports on Lakes Michigan and Huron were unable to make their regular trips, and train schedules were generally abandoned because of the drifted roadbeds.

The storm of the 5th–7th, which passed northeastward across middle Wisconsin and northern lower Michigan, caused winds of only moderate strength, but deserves mention here because it marked one of the periods of heavy precipitation.

Second decade.—The storm of the 11th–13th was by far the most severe disturbance of the month, and its influence was felt practically throughout the whole of the district. It appeared as a low-pressure area on the north Pacific coast as early as the 5th, and during the following few days moved eastward, developing gradually into a trough-shaped depression that occupied, on the morning of the 10th, a line curving from western Lake Superior through Wisconsin, Iowa, Nebraska, and Kansas to central Colorado. The movement of this depression was very slow, and by the evening of the 11th the northern end had barely reached the Straits of Mackinaw, while the line of trough had straightened somewhat and extended southwestward to eastern Texas.

Brisk to high southerly winds held steadily in the front of the disturbance, and the temperatures rose generally into the 70's, giving in many places the highest maximums of November record. Heavy rains accompanied the high temperature, and numerous thunderstorms occurred, no less than 24 being reported from the State of Michigan alone. A number of these thunderstorms were of true tornadic type, that at Owosso, Mich., which is described in a separate article, being of extreme severity for this section of the country. The counties of Calhoun, Eaton, Ingham, and Shiawassee in Michigan suffered much damage from local storms that attended the general disturbance. At Waterloo, Ind., the opera house was demolished, nearly 100 buildings overturned or otherwise damaged, and a number of freight cars untracked. The losses at this place are estimated to aggregate nearly $125,000. The Fort Wayne (Ind.) News of November 13 says:

> The tornado struck the town (Waterloo) at 11 o'clock Saturday night. The path of the tornado was from southwest to northeast and was about 200 feet wide, and the storm took every building that came in its swath. The only warning of the storm was a high wind and a hard rain that commenced to fall about 10.30 p. m., and was soon followed by hail and wind of greater velocity.

Damage to the extent of about $100,000 was wrought also in Porter County, in the northwestern portion of Indiana. A number of houses and barns were destroyed, including the high-school building at Jackson Center, and several injuries and one casualty were reported.

As the middle line of the storm passed, the high winds shifted suddenly to northwest, the rain changed to snow, and the temperature fell rapidly to readings far below the freezing point, resulting in one of the worst cold waves of record for November. Warnings of the impending drop in temperature, however, had been widely spread by the Weather Bureau, and there was ample time for preparation; but, while losses were, as a result, remarkably small, there was necessarily considerable suffering in the crowded tenement portions of the larger cities, and a number of persons lost their lives because of exposure to the cold. The following, in which the Chicago Record-Herald of November 13 sums up the local situation, can well be applied to much of the storm-affected area:

> Chicago's weather shattered all previous records in the 24 hours ending at 1 p. m. yesterday.
>
> Never before had the thermometer taken such a drop in so short a time. It fell from 74° to 13° above zero.
>
> Never before had a November 11 been so warm as Saturday, and never before had a November 12 been so cold as yesterday.
>
> Never before in the history of Chicago was one man overcome by heat and two others frozen to death in the short space of 24 hours.

By the morning of the 12th the disturbance had assumed circular proportions and had crossed Lake Huron, and passing out through the St. Lawrence Valley during that day visited the eastern portions of the district with high winds, rain turning to snow, and temperature changes similar to those mentioned above.

As a result of the warnings of the Weather Bureau practically all shipping remained in port or sought shelter before the storm struck.

The storm which crossed the district on the 17th–18th traversed southern Wisconsin, the northern portion of lower Michigan, thence swerving slightly toward the mouth of the St. Lawrence. The temperature changes were not so pronounced as were those of the previous disturbance, but high northwest winds, with freezing rain, and sleet and snow caused much damage over the northern and western portions of the district. A number of boats, especially in northern Lake Huron, were crippled, and several cases of foundering were reported. There was also a more or less complete interruption of telegraph and telephone communication in many localities, while electric-light and power service suffered badly.

Third decade.—The storm of the 26th–28th was not so general as those of the second decade, but was accompanied by considerable precipitation in the southwestern portions of the Lake region.

ICE CONDITIONS.

In western Lake Superior ice formed exceptionally early in the month. In Duluth Harbor the first formation was on the 13th, which is the earliest of record in 13 years. By the end of the month the harbor was entirely covered with ice ranging from 8 to 12 inches thick, except over the extreme western portion of Superior Bay and where the boats kept channels open to some of the docks. At Houghton the first ice formed in Portage Lake and Portage River on the 14th. On the 18th it was about 2 inches thick at the docks at Chassell, and it was necessary for tugs to keep the channel open to permit the passage of the last lumber boat of the season. On the 24th 5 inches of ice was reported in Torch Lake and Torch Bay, and on the 29th it required nearly 5 hours for a boat to make the 9 miles from Portage Canal to Houghton, and 6 inches of ice was reported at many points in the channel. Over eastern Superior, northern Michigan, and northern Huron some ice was reported during the latter half of the month, but it was not of sufficient thickness to impede navigation, and in most cases was confined to small amounts of shore ice. General navigation closed at Marquette, Mich., on the 29th.

NOVEMBER LAKE LEVELS.

The following data relative to the levels of the Great Lakes during November, 1911, are taken from the report of the United States lake survey office:

Lakes.	Above tide-water, New York.
	Feet.
Superior	602.06
Michigan-Huron	579.36
Erie	571.13
Ontario	244.50

Lake Superior is 0.17 foot lower than last month, 0.38 foot higher than a year ago, 0.64 foot below the average stage of November for the last 10 years, 1.45 feet below the high stage of November, 1900, and 0.56 foot above the low stage of November, 1879. It will probably fall 0.3 foot during December.

Lakes Michigan and Huron are 0.24 foot lower than last month, 0.44 foot lower than a year ago, 1.09 feet below the average stage of November for the last 10 years, 3.44 feet below the high stage of November, 1885, and 0.18 foot above the low stage of November, 1895. They will probably fall 0.2 foot during December.

Lake Erie is 0.40 foot lower than last month, 0.33 foot lower than a year ago, 0.71 foot lower than the average stage of November for the last 10 years, 2.45 feet below the high stage of November, 1885, and 0.43 foot above the low stage of November, 1895. It will probably fall 0.1 foot during December.

Lake Ontario is 0.12 foot lower than last month, 0.65 foot lower than a year ago, 1.05 feet lower than the average stage of November for the last 10 years, 3.32 feet below the high stage of November, 1861, and 1.69 feet above the low stage of November, 1895. It will probably fall 0.2 oot during December.

TORNADO AT OWOSSO, MICH.

By MR. F. H. COLEMAN, Observer, Weather Bureau.

On Saturday, November 11, 1911, a very destructive tornado swept through a portion of the city of Owosso, Mich., shortly after 11 p. m.

The morning weather map of that date shows a decided disturbance extending in troughlike form from Lake Superior to Texas, with the lowest pressure near Kansas City, where the reduced barometer reading was 29.36 inches. Twelve hours later the center of the storm had moved to Lake Superior, with barometer readings below 29.10 inches. Very mild temperatures prevailed throughout the southern part of Michigan, maximum temperatures in the seventies being quite general. The low-pressure area was followed very closely by an extensive area of high pressure, accompanied by a cold wave.

Mild temperatures continued at Owosso during the early part of the night, and rain began about 10.15 p. m. Suddenly there was a rush and roar of wind, a heavy downpour of rain, and the tornado tore its way through the factory and residence portions of the city, missing the business district by a distance of about two blocks.

Owing to the darkness and rain, very few people saw the tornado and only meager descriptions of its appearance could be obtained. Mr. M. D. Corey had just left his laundry building, adjoining the Main Street Bridge, and had reached the center of the business district, about two blocks distant, when suddenly the streets were filled with flying débris, and on looking back he saw a peculiar formation, slightly luminous below and very black above, which had the appearance of a huge rope writhing and twisting in the air. It seemed to pass directly above the laundry, completely wrecking that structure.

The path of the storm, extending from southwest to northeast, was about 1½ miles long and from 300 to 500 feet wide. However, judging from its effects, the tornado itself was probably not over 200 feet in diameter, but within the limits indicated bounded and rebounded and swung from side to side in a very erratic manner. This is evidenced by the fact that there were limited areas of great destruction, sometimes on one side and sometimes on the other of its general path, while in the intervening areas but little damage occurred.

The first evidence of the tornado was to be found near the southwestern limits of the city, where a group of houses was considerably damaged, one being unroofed and one nearly demolished. Thereafter throughout a space of several blocks of thinly populated territory there was practically no damage. Then the whirl again

touched the ground and overturned the house occupied by Mr. and Mrs. Harry Corwin, both of whom were instantly killed. The overturned house was swung around at a considerable angle with its original position, and the house adjoining was twisted about 4 feet north on its foundation, but the houses across the street to the east sustained only slight damage.

Beyond, another space of about three blocks extending to the Grand Trunk Railway was untouched. At next dip of the tornado several freight cars were thrown from the Grand Trunk tracks, and the full fury of the storm fell upon the upper portion of the Estey furniture factory. This was a three-story frame building, and the two upper floors were crushed and torn into an unrecognizable mass of wreckage. Débris from this building was strewn for hundreds of feet in a northeasterly direction, one section of boarding about 15 by 25 feet being carried over into Main Street, at least 1,000 feet away. There was a veritable rain of splinters of timber and furniture 2 blocks away and one piece of 4 by 6 about 5 feet long was driven through the side of a house nearly 500 feet distant. Had the tornado occurred during working hours there would undoubtedly have been much loss of life at this factory. As it was, the night engineer was the only person in the building, and he fortunately escaped with but minor cuts and bruises. A corner of the brick structure occupied by the Woodard Furniture Co. was next torn out, the bricks falling outward in a southeasterly direction, or toward the center of the storm's path. The full force of the tornado was also felt in the residence block northeast of the Woodard factory. Here the house occupied by Thomas Kerwin and family was wrecked, the only part left standing being the kitchen and a bedroom above. This house shows perfectly the result of the sudden outrush of air within as the vacuum of the tornado reached it, the walls being forced outward in all directions. A scene of desolation extends for one block northeast from this point, every house having sections of walls or roof torn out.

The tornado bounded over the houses between this block and Main Street, then struck and wrecked the City Laundry, unroofed a house nearby, and tore out the southwest corner of a store across the street. A number of large trees 2 blocks west of the laundry were uprooted and the houses on the street 1 block west greatly damaged.

From this place the tornado crossed the river to the better residence district, where a brick house was unroofed and its walls partly demolished, while nearly all the shingles were stripped from the roof of the house adjoining. Practically all of the residences for one block north of this point had parts of roofs and walls torn away, or were otherwise damaged. There was not much damage sustained by the houses in the blocks on either side, but a score of great trees standing on lawns in the block to the northeast were uprooted. Here the twisting action of the storm was very apparent, as some of the trees on the east end of the block fell toward the northwest, while those on the west end fell toward the northeast.

This place marks the end of the path of serious damage, although the roofs of two churches situated one to two blocks east of the tornado's path were considerably damaged.

Everywhere along its track the storm prostrated trees and poles, and some of the streets were rendered impassable by the entanglement of wires, trees, and débris. Fortunately no fires resulted, partly because the weather had been so warm that heat was unnecessary, and partly because the general rain and moderate to brisk winds preceding the tornado had interfered with the long-distance transmission wires of the Commonwealth Power Co. and the electric current had failed about 15 minutes before the occurrence of the tornado.

The storm was a severe blow to the city, which has a population of about 10,000. Two people were killed and 15 injured, one very seriously. It is fortunate that, owing to the lateness of the hour and the inclement weather conditions, the streets were almost deserted, as otherwise many people would undoubtedly have been injured by the flying débris or falling structures. The property loss is estimated at $500,000, of which $150,000 is due to the destruction of the Estey factory. About 110 men were thrown out of employment by the loss of this plant.

There was some damage at points outside of the city; 3 barns 6 miles southwest of Owosso were unroofed or otherwise damaged and some damage was also reported 2 or 3 miles northeast of the town.

TABLE 1.—*Climatological data for November, 1911. District No. 4, Lake Region.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota.																				
Cloquet	Carlton	800	....	19.7	.....	47	7	− 13	16	35	1.10	.....	0.60	9.0	6	6	12	12	w.	S. B. Detwiler.
Duluth	St. Louis	1,133	40	21.4	− 7.9	40	8	− 2	13	28	2.59	+ 1.01	0.61	16.7	11	4	13	13	nw.	U. S. Weather Bureau.
Floodwood	....do	1,257	6	.....	.....	.....	.....	.....	.....	.....	1.16	.....	0.34	7.3	5	16	3	11	w.	M. H. Schussler.
Stephens Mine	....do	1,500	4	18.4	.....	43	8	− 16	16	37	1.40	.....	0.24	14.5	9	19	8	3	w.	Oliver Iron Mining Co.
Two Harbors	Lake	614	17	24.6	− 6.3	42	7†	− 1	13	34	1.40	− 0.20	0.60	10.0	7	6	19	5	sw.	G. W. Watts.
Virginia	St. Louis	1,434	17	18.1	− 6.5	43	8	− 14	16	33	1.58	+ 0.42	0.35	17.0	9	10	8	12	nw.	Oliver Iron Mining Co.
Wisconsin.																				
Appleton	Outagamie	795	10	29.2	− 6.4	63	11	4	29	29	2.59	+ 0.84	0.80	9.9	11	11	8	11	w.	Wm. O. Thiede.
Ashland	Ashland	647	20	26.0	− 5.7	47	8	0	13	29	1.66	+ 0.13	0.67	13.0	9	14	6	10	s.	Sam Wheeler.
Bayfield	Bayfield	635	2	27.0	.....	46	8†	0	13	25	3.03	.....	0.67	21.6	10	8	12	10	sw.	John P. Kiel.
Cecil	Shawano	804	13	28.6	− 3.2	64	11	3	29	36	2.75	+ 1.14	0.61	15.5	9	5	16	9	sw.	Louis W. Schmidt.
Crandon	Forest	1,060	16	24.8	− 4.0	56	11	− 6	16	40	1.85	− 0.20	1.20	12.0	2	2	11	17	w.	Frank Shoemaker.
Florence	Florence	1,293	20	26.5	− 3.4	58	11	− 1	13	37	2.43	+ 0.32	1.24	13.0	5	12	0	18	nw.	Fred S. Evans.
Fond du Lac	Fond du Lac	800	25	29.4	− 4.5	70	11	0	29	39	3.68	+ 1.97	1.37	9.5	9	7	6	17	nw.	Geo. W. Marshall.
Grand River Locks	Marquette	770	15	29.3	.....	69	11	0	29	52	4.26	+ 2.50	1.68	8.0	9	11	3	16	nw.	Jerry Parkinson.
Green Bay	Brown	617	25	28.6	− 3.9	66	11	5	13	36	2.54	+ 0.58	0.67	10.3	14	2	9	19	sw.	U. S. Weather Bureau.
High Falls	Marinette	810	0	27.4	.....	62	11	− 3	16	43	3.22	.....	1.40	16.5	6	1	22	7	nw.	No. Hydro-Elect. Power Co.
Iron River	Bayfield	1,096	2	23.6	.....	46	10	− 8	24	32	2.96	.....	0.70	29.5	12	14	2	14	w.	Winfield E. Tripp.
Kewaunee	Kewaunee	590	2	30.4	.....	60	10†	5	13	41	3.34	.....	1.00	12.9	9	6	6	18	w.	Eugene V. Kimball.
Manitowoc	Manitowoc	616	60	31.8	− 4.0	61	11	7	13	40	3.33	+ 1.25	0.86	7.5	9	5	10	15	w.	Johanna Lups.
Menasha	Winnebago	764	14	.....	.....	.....	.....	.....	.....	.....	2.73	+ 1.56	1.03	7.5	11	10	5	15	sw.	Geo. T. Allanson.
Menomonee Falls	Waukesha	842	2	30.4	.....	71	11	3	29	44	3.31	.....	0.86	5.1	12	8[a]	9[a]	12[a]	sw.	Arthur H. Christman.
Milwaukee	Milwaukee	681	40	32.2	− 3.9	73	11	9	29	43	2.49	+ 0.51	0.70	2.3	11	8	11	11	w.	U. S. Weather Bureau.
New London	Outagamie	762	15	27.6	− 6.5	67	11	1	29	30	2.65	+ 0.85	0.83	10.0	7	9	5	16	nw.	August H. Pape.
Oconto	Oconto	590	20	28.7	− 5.6	60	11	− 4	16	35	2.19	+ 0.12	0.40	13.0	10	9	7	14	w.	Wm. K. Smith.
Oshkosh	Winnebago	744	22	27.6	− 7.1	68	11	− 1	29	39	2.96	+ 1.31	0.60	10.0	7	11	6	13	sw.	Evan Vincent.
Pine River	Waushara	900	16	28.4	− 5.7	67	11	0	29	29	3.22	+ 1.60	1.06	8.4	13	4	12	14	sw.	Geo. H. Carpenter.
Plum Island	Door	588	3	32.9	.....	54	11	8	13	36	3.31	.....	0.98	16.0	9	3	11	16	nw.	Geo. C. Robinson.
Plymouth	Sheboygan	843	1	29.9	.....	70	11	5	29	38	3.65	.....	1.20	9.7	13	9	8	13	w.	Paul O. Feldrappe.
Port Washington	Ozaukee	713	18	31.6	− 4.5	70	11	7	29	45	3.28	+ 1.32	0.70	8.5	10	9	4	17	nw.	Richard C. Kann.
Racine	Racine	633	14	33.0	− 6.7	74	11	7	29	45	3.56	+ 1.65	0.96	0.8	9	18	2	10	sw.	Daniel Davis.
Ripon	Fond du Lac	935	1	28.6	.....	67	11	3	29	37	3.78	.....	0.71	11.6	10	8	5	17	w.	Ripon College.
Sheboygan	Sheboygan	831	12	31.8	− 6.5	59	11†	7	13	44	4.00	+ 2.14	1.22	5.0	10	6	13	11	nw.	Louis C. Meyer.
Sturgeon Bay	Door	600	12	30.2	− 4.9	57	11	5	13	42	3.67	.....	1.26	15.0	9	5	9	16	w.	Adam N. Dier.
Superior	Douglas	671	2	22.0	.....	42	8†	− 2	16	34	1.50	.....	0.40	7.2	11	9	8	13	sw.	Edward B. Banks.
Waupaca	Waupaca	857	16	26.7	− 6.9	65	11	0	29	31	2.69	+ 0.98	0.81	13.0	7	11	7	12	sw.	James H. Flagg.
Illinois.																				
Chicago	Cook	824	41	35.4	− 3.8	74	11	12	13	42	3.27	+ 0.77	1.51	1.2	14	5	14	11	w.	U. S. Weather Bureau.
Indiana.																				
Auburn	DeKalb	874	15	33.4	− 5.3	69	11	9	13†	38	3.67	+ 1.30	0.90	.....	13	10[a]	0[a]	19[a]	sw.	Mrs. Josie B. Kuhlman.
Berne	Adams	849	2	35.7	.....	71	11	11	13	58	2.80	.....	0.87	6.1	11	11	10	9	sw.	Henry M. Reusser.
Elkhart	Elkhart	801	9	36.0	.....	72	11†	11	12	61	3.52	.....	1.11	4.0	12	12[a]	6[a]	11[a]	nw.[a]	Dr. Miles Medical Co.
Fort Wayne	Allen	856	15	35.2	− 5.4	70	11	10	13	44	3.75	+ 0.81	1.33	4.5	16	3	9	18	sw.	U. S. Weather Bureau.
Hammond	Lake	598	20	34.7	− 4.5	77	11	10	13	63	1.92	− 0.39	0.88	4.0	5	7	13	10	.....	Carson W. Whitney.
Howe	Lagrange	886	6	35.0	.....	79	11	10	13	38	2.31	.....	1.10	6.0	7	20	0	10	.....	James E. Zook.
South Bend	St. Joseph	726	18	33.5	− 6.1	75	11	9	13	33	4.98	+ 2.16	1.75	24.5	16	5	8	17	sw.	Henry H. Swain.
Whiting	Lake	606	2	35.6	.....	75	11	11	13	57	2.31	.....	0.91	4.5	8	3	15	12	sw.	D. H. Boyd.
Michigan, Upper Peninsula.																				
Baraga	Baraga	623	9	30.2[c]	.....	56[c]	3	2[c]	28	43[c]	1.70	.....	0.50	17.0	7	2[f]	0[f]	22[f]	w.	D. S. S. & A. Ry.
Bergland	Ontonagon	1,300	1	24.4	.....	44	11	− 5	20	36	3.12	.....	0.88	22.4	7	7[a]	14[a]	8[a]	w.	Frank McMonigal.
Blaney	Schoolcraft	....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Calumet	Houghton	1,246	23	26.0	− 4.5	42	8†	7	13	29	4.59	+ 1.83	1.55	31.5	14	6	4	20	w.	E. S. Grierson.
Chatham	Alger	875	10	26.2	− 6.0	56	11	1	13†	40	4.14	+ 1.16	1.05	30.7	16	5	8	17	nw.	U. P. Experiment Sta.
Deer Park	Luce	610	10	31.6	− 2.1	60	11	4	13	40	.....	.....	.....	.....	.....	3	2	25	se.	Mrs. Sarah E. McGaw.
Detour	Chippewa	585	10	30.4	− 4.2	70	11	5	29	31	2.47	− 0.65	0.30	7.5	9	11	6	13	sw.	Linton Melvin.
Eagle Harbor	Keweenaw	622	12	30.6	− 5.4	46	9	13	14	24	3.86	+ 1.31	1.27	21.0	10	3	6	21	w.	John Nolen.
Escanaba	Delta	612	38	29.2	− 2.5	55	11	3	13	35	3.43	+ 1.17	1.92	18.1	12	5	6	19	nw.	U. S. Weather Bureau.
Ewen	Ontonagon	1,147	10	23.0	− 6.5	43	10	− 8	20	40	5.56	+ 3.52	1.20	47.5	12	8	0	22	nw.	W. B. Hatfield.
Grand Marais	Alger	610	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Lena Truedell.
Green	Ontonagon	622	0	31.2	.....	50	4	12	12	27	2.90	.....	1.20	32.0	6	4	14	12	.....	T. A. Green.
Houghton	Houghton	668	10	27.4	− 4.2	46	10	8	13	21	3.67	+ 0.87	0.98	23.9	16	5	6	19	nw.	U. S. Weather Bureau.
Humboldt	Marquette	1,536	14	25.2	− 2.1	57	11†	−12	16	38	5.00	+ 3.43	1.60	40.0	8	7	2	21	w.	D. S. S. & A. Ry.
Iron Mountain	Dickinson	1,111	10	29.0	− 3.4	58	11	0	13	48	2.27	+ 0.63	0.62	.....	9	7	12	11	nw.	Chapin Mining Co.
Iron River	Iron	1,504	14	21.7	− 6.9	45	8	− 5	15†	32	3.50	+ 1.28	0.60	17.5	9	14	8	8	nw.	Victor D. Laing.
Ironwood	Gogebic	1,520	8	23.2	.....	41	10	− 4	13	29	6.94	.....	1.63	46.0	11	13	3	14	s.	J. V. Brennan.
Ishpeming	Marquette	1,536	11	26.0[b]	− 4.3	57[b]	11	− 1[b]	13	30[b]	4.15	+ 1.74	1.00	33.0	16	4	10	16	nw.	Clev'd Cliffs Iron Co.
Isle Royale	Keweenaw	610	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. A. Malone.
Mackinac Island	Mackinac	831	10	30.8	− 4.0	62	12	13	12	49	4.21	+ 1.66	1.12	10.5	9	0	3	27	sw.	M. I. State Park Comn.
Maple Ridge	Delta	.....	5	26.6	.....	55	11	− 3	19	46	5.89	.....	1.37	38.0	9	4	5	21	sw.	Herman Johnson.
Marquette	Marquette	734	40	29.0	− 2.9	60	11	4	13	31	4.68	+ 1.89	1.06	40.0	18	0	16	14	w.	U. S. Weather Bureau.
Menominee	Menominee	581	12	30.2	− 5.6	57	12	4	13	43	2.10	+ 0.63	0.70	12.0	6[a]	15	3	12	nw.	Chicago & Northwestern Ry.
Munising	Alger	631	14	30.2	− 1.9	58	11	4	13	40	4.71	+ 1.81	1.01	13.3	12	5	10	15	s.	Albert Oas.
Newberry	Luce	773	9	28.5	.....	60	11	2	13	43	3.31	.....	0.50	23.7	18	4	12	14	w.	John Brown.
Powers	Menominee	868	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chicago & Northwestern Ry.
St. Ignace	Mackinac	593	21	32.4	− 1.4	62	12	13	13	42	4.35	+ 1.98	0.80	16.7	14	9	14	7	w.	D. S. S. & A. Ry.
Sault St. Marie	Chippewa	614	23	28.8	− 1.9	58	11	8	29	42	3.55	+ 0.63	1.40	12.5	19	2	3	25	e.	U. S. Weather Bureau.
Thomaston	Gogebic	1,347	14	21.8	− 7.3	41	10	−11	16	35	3.62	+ 1.61	1.00	33.0	10	6	5	19	.....	D. S. S. & A. Ry.
Victoria	Ontonagon	1,263	1	22.3	.....	41	10	− 9	13	34	5.00	.....	1.05	46.7	14	7	4	19	nw.	R. S. Schultz, jr.
Watersmeet	Gogebic	.....	2	22.8	.....	46	11	− 3	13	33	3.06	.....	0.87	24.0	15	13	3	14	sw.	B. N. Grant.
Whitefish Point	Chippewa	610	11	31.4	− 2.9	54	12	6	13	39	4.32	+ 1.18	0.62	37.5	15	5	0	25	nw.	Robert Carlson.
Lower Peninsula.																				
Adrian	Lenawee	770	33	36.6	− 2.3	69	11	11	13	48	5.22	+ 2.01	1.40	3.4	10	2	12	16	sw.	H. E. Hubbard.
Allegan	Allegan	698	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Pere Marquette R. R.
Alma	Gratiot	750	24	33.7	− 3.9	68	11	12	13	47	3.18	+ 0.50	1.00	7.8	12	4	7	19	sw.	P. M. Smith.

TABLE 1.—*Climatological data for November, 1911. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Lower Peninsula*—Con.**																			
Alpena	Alpena	609	38	32.4	− 1.3	60	11	13	13	41	4.63	+ 2.07	1.60	17.0	16	2	9	19	w.	U. S. Weather Bureau.
Ann Arbor	Washtenaw	930	31	34.6	− 2.5	67	11	11	13†	49	2.94	+ 0.35	0.71	3.3	11	4	7	19	sw.	University of Michigan.
Arbela	Tuscola	728	15	33.7	− 4.2	68	12	12	13	50	3.40	+ 0.77	0.85	4.5	9	0	8	22	sw.	Wm. Atkin.
Battle Creek	Calhoun	822	27	34.8	− 3.5	70	11	13	13	51	3.79	+ 1.41	1.12	3.5	10	4	7	19	w.	Elmer E. Sager.
Bay City	Bay	593	15	34.2	− 2.8	70	11	8	15	58	5.56	+ 3.55	2.10	5.6	10	12	8	10	nw.	Pere Marquette R. R.
Benzonia	Benzie	832	15																	J. W. Saunders.
Berlin	St. Clair		22	34.0[b]	− 2.4	64[b]	11	15	16	23[c]	3.45	+ 0.81	0.76	9.1	14[a]	1	12	17	sw.	R. O. Gould.
Big Rapids	Mecosta	906	15	31.0	− 4.0	66	11	8	13	50	4.45	+ 1.82	1.25	10.0	16	7	5	18	w.	Supt. Water Works.
Bloomingdale	Van Buren		7	34.9	.....	71	11†	8	13	53	4.78	.....	1.00	6.8	9	9	4	17	sw.	John M. Haven.
Cadillac	Wexford	1,203	2	31.0	.....	66	12	9	13	50	6.43	.....	1.80	22.2	16	5	5	20	sw.	Cadillac Water & Light Co.
Cassopolis	Cass	903	10	36.1	− 1.6	74	11	20	30	40	1.17	− 2.12	0.50	11.0	5	15	0	15	w.	Michigan Central R. R.
Charlevoix	Charlevoix	610	33	34.5	− 2.3	62	11	9	14	27	3.16	+ 0.65	1.03	9.0	8	2	4	24	sw.	Pere Marquette R. R.
Charlotte	Eaton		7	34.0	.....	70	11	4	16	47	2.72	.....	0.73	4.3[a]	7	4	4	22	sw.	City of Charlotte.
Cheboygan	Cheboygan	611	21	30.2	− 4.6	65	11	11	29	33	5.50	+ 2.97	1.20	23.2	8	4	13	13	nw.	E. A. Bouchard.
Clinton	Lenawee	830	21	35.9	− 1.9	67	11†	6	16	47	3.20	+ 0.62	0.90	4.8	10	10	9	11	sw.	David Woodward.
Coldwater	Branch	984	14	36.2	− 2.1	73	11	9	13	52	3.68	+ 0.82	1.20	4.2	9	4	9	17	sw.	Lake Shore & Mich. So. R.R.
Concord	Jackson		6	34.2	.....	71	12	1	16	55	2.15	.....	0.56	5.1	8	8	18	4	sw.	W. N. Armstrong.
Croton	Newaygo	685	3	34.8	.....	70	11	15	13	48	4.00	.....	1.70	1.0	9	2	14	14	w.	G. R. M. Power Co.
Detroit	Wayne	730	40	35.6	− 3.0	65	11	12	13	49	3.58	+ 0.95	0.73	7.0	14	2	13	15	w.	U. S. Weather Bureau.
Durand	Shiawassee	799	4																	H. J. Tobin.
East Tawas	Iosco	590	14	33.0	− 2.9	55	11	10	13	32	2.12	+ 0.16	0.55	5.0	10	16	9	5	w.	Detroit & Mackinaw Ry.
Eloise	Wayne	640	14	36.0	− 2.4	69	12	11	16	47	3.33	+ 1.54	0.64	5.6	13	4	6	20	sw.	John Gilmore.
Flint	Genesee	730	22	34.7	− 1.2	67	11	13	13	46	3.02	+ 0.56	1.03	2.5	9	4	8	18	w.	William L. Fisher.
Frankfort	Benzie	589	7	34.4	.....	64	12	13	13	45	3.96	.....	1.24	16.5	13	2	0	28	w.	Geo. Morency.
Ganges	Allegan	665	2	36.3	.....	78	11	15	13	51	4.41	.....	1.50	15.8	13	2	6	22	sw.	H. H. Hutchins.
Gaylord	Otsego	1,367	11	28.4	− 3.5	63	12	8	13	45	5.80	+ 2.36	1.40	17.0	17	8	0	22	sw.	Michigan Central R. R.
Gladwin	Gladwin	704	15	33.2[b]	− 2.0	68[b]	11	9[b]	13	48[b]	2.25[b]	+ 0.21	1.20[b]	4.0[b]	5[b]	14[b]	9[b]	5[b]	nw.	Geo. R. Smith.
Grand Haven	Ottawa	628	30	35.9	− 2.1	71	11	15	13	29	4.93	+ 2.40	2.18	8.6	18	3	9	18	w.	U. S. Weather Bureau.
Grand Rapids	Kent	707	22	35.2	− 2.9	72	11	14	13	33	3.88	+ 1.35	1.49	6.2	16	3	6	21	w.	Do.
Grape	Monroe	625	21	35.5	− 3.5	68	12	11	16	50	3.00	+ 0.48	0.89	4.2	10	4	14	12	w.	Joseph W. Morris.
Grass Lake	Jackson	989	5	33.4	.....	66	11	8	16	28	2.74	.....	0.75	9.0	10	10	3	17	sw.	Menzo Conklin.
Grayling	Crawford	1,147	21	31.0	− 3.4	65	11	9	13†	38	5.94	+ 3.30	1.51	19.3	15	2	7	21	nw.	S. N. Insley.
Harbor Beach	Huron	635	23	36.2	− 1.0	64	11†	14	13	44	1.25	− 0.94	0.35	4.5	8	5	11	14	w.	Pere Marquette R. R.
Harrison	Clare	1,159	18	31.8	− 1.6	68	11	8	13	44	3.71	+ 1.55	1.56	.....	4	6	2	22	sw.	Do.
Harrisville	Alcona	616	27	32.2	− 2.7	60	12	10	13	40	3.74	+ 1.19	0.90	20.0	12	5	5	20	sw.	D. W. Mitchell.
Hart	Oceana	698	19	35.2	− 2.8	75	11†	11	13	55	2.65	+ 0.34	0.45	11.0	11	2	11	17	sw.	Pere Marquette R. R.
Hayes	Huron	620	21	33.0	− 5.4	67	11	10	13	43	4.15	+ 2.35	1.15	7.2	10	3	12	15	sw.	C. F. Leipprandt.
Highland	Oakland	830	19								3.49	+ 0.75	0.62	7.0	14					A. D. De Garmo.
Hillsdale	Hillsdale	1,150	14	34.0	− 3.4	67	11	6	16	51	4.02	+ 1.12	1.05	9.0	9	12[a]	4[a]	13[a]	sw.	C. L. Herron.
Holland	Ottawa	610	5	36.4	.....	74	11	16	13	50	4.36	.....	1.19	10.0	15	3	13	14	sw.	City of Holland.
Howell	Livingston	924	19	33.4	− 3.2	66	11†	10	13†	51	3.09	+ 0.81	1.00	4.3	12	7	4	19	sw.	Frank Sharp.
Ivan	Kalkaska		22	30.2	− 3.3	66	11†	6	13†	51	4.39	+ 1.77	1.05	27.0	16	4	10	16	w.	O. L. Giddings.
Jackson	Jackson	927	14	34.4	− 3.9	69	11†	7	16	54	3.86	+ 1.59	1.45	4.5[a]	10	6	7	17	w.	City of Jackson.
Jeddo	St. Clair	667	22	33.9	− 2.8	63	11†	11	23	42	2.60	+ 0.12	0.70	6.5	11	6	15	9	sw.	William Bice.
Kalamazoo	Kalamazoo	955	35	34.5[e]	− 3.1	71[e]	11	5[e]	12	64[e]	3.13	+ 0.32	0.65	10.5	11	0	16	14	w.	Kalamazoo Asylum.
Lansing (Agr. College)	Ingham	820	47	33.8	− 3.0	68	11	12	16	40	3.40	+ 0.99	0.76	8.2	16	2	6	22	sw.	U. S. Weather Bureau.
Lansing (Capitol)	....do	841	24	34.6	− 2.5	69	11	12	13†	49	3.17	+ 0.78	0.87	5.4	14	7	3	20	sw.	State Board of Health.
Lapeer	Lapeer	827	12	34.0	− 3.5	62	11	13	13	27	5.17	+ 3.40	1.00	.....	8	0	24	6	nw.	Michigan Home.
Ludington	Mason	586	13	35.2	− 2.6	68	12	9	13	50	1.87	− 0.17	0.49	8.0	13	3	16	11	sw.	Pere Marquette R. R.
Luther	Lake	1,028	1	31.7	.....	69	12	7	13	55	4.18	.....	1.55	8.0	16	5	5	20	w.	John W. Nichoson.
Mackinaw	Cheboygan	592	20	33.2	− 2.5	65	11	16	12†	46	4.13	+ 1.62	0.68	28.0	11	3	8	19	nw.	G. R. & I. Ry.
Mancelona	Antrim	1,121	15	.....	.....	77[a]	12	.....	.....	.....	4.65	+ 1.91	1.00	46.5	11	5[c]	0[c]	22[c]	nw.	G. R. & I. Ry.
Manistee	Manistee	600	14	35.5	− 1.2	71	11	10	12	40	2.45	0.00	1.40	4.0	4	2	16	12	nw.	Pere Marquette R. R.
Marshall	Calhoun	896	0																	E. B. Stuart.
Midland	Midland	604	12	35.4	− 1.5	68	11	11	13	41	0.80	− 0.67	0.30	5.0	4	2	0	28	sw.	Pere Marquette R. R.
Morenci	Lenawee	811	4	36.0	.....	67	11†	12	13†	50	3.09	.....	1.06	4.0	11	5	10	15	sw.	George J. Tripp.
Mount Clemens	Macomb	615	11	36.8[a]	− 2.1	71[b]	12	13	13	52[b]	2.82	+ 0.51	0.79	4.3	11	11	8	11	sw.	Waterworks.
Mount Pleasant	Isabella	826	12	38.8	+ 2.6	75	11	18	2	33	0.64	− 1.43	0.16	2.0	6	9	7	14	sw.	Pere Marquette R. R.
Muskegon	Muskegon	587	15	36.2	− 2.6	70	10†	11	13	51	3.50	+ 1.17	1.50	5.0	11	11	3	16	w.	G. R. & I. Ry.
Old Mission	Grand Traverse	858	17	32.0	− 4.3	60	11	9	13	38	3.93	+ 1.36	1.25	17.9	15	1	7	22	nw.	E. O. Ladd.
Olivet	Eaton	934	21	33.6	− 3.0	68	11†	12	13†	49	4.15	+ 1.50	1.13	11.3	15	6	5	19	s.	G. A. Knapp.
Omer	Arenac	616	12	29.8[c]	− 6.5	48[c]	27	10[c]	29	32[c]	1.15	− 0.72	0.70	2.5	4	1	9	20	sw.	Detroit & Mackinaw Ry
Onaway	Presque Isle	826	8	28.6	.....	67	11	10	2†	42	5.40	.....	1.80	21.0	10	4	4	22	w	Do.
Owosso	Shiawassee	731	14	36.0	− 0.9	74	11	13	13	52	4.95	+ 2.60	2.04	3.4	14	1	18	11	w.	Owosso Sugar Co.
Petoskey	Emmet	660	21	32.6	− 2.7	67	11	14	13	38	4.19	+ 1.32	0.82	21.4	16	2	5	23	w.	G. R. & I. Ry.
Plymouth	Wayne	725	14					15	13	.....	3.55	+ 1.36	1.10	T.	5	10	4	16	sw.	Pere Marquette R. R.
Pontiac	Oakland	935	11	35.4	− 2.6	66	12	11	16	46	2.58	+ 0.10	0.60	2.7	17	10	4	16	s.	Fred W. Shaw.
Port Austin	Huron	618	14	35.0	− 3.1	68	12	17	20†	45	2.06	+ 0.33	0.54	0.1	8	10	4	16	s.	Pere Marquette R. R.
Port Huron	St. Clair	639	36	34.8	− 2.0	66	11	14	13	49	2.87	+ 0.20	0.75	7.6	13	2	8	20	sw.	U. S. Weather Bureau.
Reed City	Osceola	1,033	14	31.1	− 3.7	67	11†	9	13	50	5.10	+ 3.10	2.00	6.3	10	1	7	22	nw.	Pere Marquette R. R.
Roscommon	Roscommon	1,141	10	30.0	− 4.4	61	12	7	13	45	2.36	+ 0.53	0.30	19.2	16	6	6	18	w.	State Forestry Com.
Saginaw	Saginaw	601	9	35.5	.....	59	10†	12	13	38	2.79	.....	0.71	5.0	11	5	15	10	w.	Postmaster.
Saginaw West Side	....do	601	16	35.0	− 2.9	70	11	11	13	48	2.76	+ 0.48	0.72	5.2	15	7	14	9	sw.	Robert B. Hudson.
St. James	Charlevoix	681	5	32.2	.....	62	11	11	13	39	4.26	.....	1.08	25.0	10	2	4	24	nw.	James Malone.
St. Joseph	Berrien	593	24	37.4	− 3.0	74	11	20	12†	52	2.15	− 0.78	0.80	1.9	14	4	3	23	sw.	City of St. Joseph.
Sandusky	Sanilac	790	2	33.5	.....	65	12	14	29	42	3.03	.....	0.62	4.0	11	7	5	17	sw.	Pere Marquette R. R.
Saranac	Ionia	639	16	34.6	− 1.7	70	11	12	13	45	4.36	+ 1.84	1.10	3.0	10	0	1	29	sw.	John Wallington.
South Haven	Van Buren	585	15	36.6	− 2.8	72	11†	18	13	49	5.01	+ 2.33	2.00	4.1	6	5	22	3	se.	Mrs. M. E. De Diemer.
Stanton	Montcalm	880	17	35.8	− 0.3	77	11	12	13	49	.....	.....	.....	.....	.....	5	5	20	sw.	City of Stanton.
Thornville	Lapeer	975	34	33.4	− 4.2	63	11	10	13	30	2.93	+ 0.18	0.78	19.5	14	5[a]	8[a]	16[a]	w.	J. S. Caulkins.
Traverse City	Grand Traverse	588	14	34.2	− 2.8	69	12	11	13	49	1.97	− 0.21	0.50	13.5	7	4	5	21	nw.	G. R. & I. Ry.
Vassar	Tuscola	641	10	34.9	− 3.1	68	12	11	13	47	2.77	+ 0.83	0.81	4.0	7	3	12	15	sw.	Pere Marquette R. R.
Wasepi	St. Joseph	842	14	35.0	− 3.1	72	11	10	13	53	4.16	+ 1.34	0.90	8.0	10	10	0	20	nw.	Charles A. Palmer.
West Branch	Ogemaw	973	7								1.29	.....	0.50	5.0	5	7	1	22	w.	Michigan Central R. R.
Woodlawn (P. O. Vienna)	Montmorenci		9	27.6	.....	64	11†	3	3	47	5.81	.....	1.30	41.0	12	3	7	20	w.	T. C. Mathews.
Ypsilanti	Washtenaw	736	26	34.6	− 2.6	67	11†	8	16	48	3.66	+ 0.69	0.75	5.0	9	0	25	5	sw.	Orin J. Bemiss.
Ohio.																				
Akron	Summit	1,081	24	35.7	− 4.3	68	11	12	13	38	2.01	− 0.66	0.70	6.0	14	4	2	24	sw.	Prof. C. R. Olin.
Benton Ridge	Hancock	800	18	37.0	− 3.4	68	11	11	13	49	3.05	+ 0.51	0.70	7.2	11	3	10	17	sw.	J. W. Powell.
Bowling Green	Wood	670	30	36.2	− 3.1	69	11	5	16	51	3.33	+ 0.37	0.85	6.5	10	7	8	15	sw.	G. C. Housekeeper.
Bucyrus	Crawford	1,000	17	36.1	− 3.0	67	12	10	13	50	3.30	+ 1.28	0.75	3.0	9	8	3	19	sw.	James R. Hopley.
Cleveland (1)	Cuyahoga	762	40	37.3	− 3.1	70	12	15	13	52	3.56	+ 0.81	1.35	7.6	10	1	7	22	sw.	U. S. Weather Bureau.
Cleveland (2)	....do	754	14	37.6	− 3.4	69	11	15	13	40	2.49	+ 0.66	0.66	6.1	13	3	5	22	sw.	Rev. F. L. Odenbach, S. J.
Conneaut	Ashtabula	675	1	37.3	.....	60	12	14	13	51	3.05	.....	0.64	7.0	14	4	2	24	sw.	E. L. Ransom.

TABLE 1.—*Climatological data for November, 1911. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Ohio*—Continued.**																				
Defiance	Defiance	712	17	36.7	− 2.8	67	11†	10	16	50	3.57	+ 0.97	1.08	3.2	10	8	7	15	sw.	John F. Heilshorn.
Findlay	Hancock	776	22	35.2	− 4.9	69	11	10	13†	49	3.32	+ 0.55	0.95	3.5	10	17	8	5	sw.	Dr. E. A. Moser.
Fremont	Sandusky	628	9	37.8	.....	68	11†	12	13	48	2.53	.....	0.59	6.5	11	12	6	12	sw.	E. Stanley Thomas.
Hedges	Paulding	725	17	36.0	− 3.4	67	11†	10	13†	50	4.14	+ 1.81	1.20	6.0	8	9	14	7	sw.	Charles Stutzman.
Hillhouse	Lake	997	18	35.4	− 3.8	68	12	11	13†	50	3.46	+ 0.16	0.80	10.2	14	5	13	12	sw.	J. W. Doncaster.
Hiram	Portage	1,260	31	35.8	− 3.0	67	12	11	13	50	3.51	+ 0.40	0.70	9.5	12	7	7	16	w.	Prof. G. H. Colton.
Hudson	Summit	1,153	50	36.3	− 3.3	66	12	12	13	47	3.14	+ 0.09	0.84	.....	13	5	8	17	s.	Dr. W. I. Chamberlain.
Lima	Allen	875	12	36.0	− 5.4	67	12	11	13	50	3.27	+ 1.43	1.15	3.0	8	6	14	10	sw.	Miss Ollie DeLong.
Medina	Medina	944	23	36.1	− 4.7	67	12	12	13	39	2.61	− 0.20	0.65	7.0	12	10	1	19	w.	F. W. Clark.
Montpelier	Williams	880	19	35.8	− 2.0	68	11†	10	13	50	4.12	+ 1.19	0.98	7.0	10	5	5	20	w.	G. L. Laser.
Napoleon	Henry	680	24	37.6	− 2.5	68	12	12	13	49	4.00	+ 1.34	1.05	7.0	10	9	11	10	w.	A. C. Senter.
New Bremen	Auglaize	1,038	18	36.4	− 4.9	68	11†	10	13	52	2.44	− 0.49	0.70	1.5	8	6	19	5	sw.	Miss Lillian Grothaus.
North Royalton	Cuyahoga	1,000	18	35.8	− 4.0	66	12	12	13	48	2.83	+ 0.21	0.66	8.0	10	9	9	12	sw.	W. S. Edgerton.
Norwalk	Huron	719	25	37.7	− 2.8	70	11†	13	13	50	2.91	+ 0.39	0.60	3.0	10	4	7	19	w.	Giles R. Gregory.
Oberlin	Lorain	855	36	37.6	− 2.3	68	12	13	13	48	2.59	+ 0.08	0.57	6.9	11	8	5	17	w.	Prof. F. F. Jewett.
Ottawa	Putnam	720	16	37.3	− 3.7	68	11	11	13	50	2.59	− 0.15	0.74	1.0	7	4	12	14	w.	Prof. J. T. Maidlow.
Sandusky	Erie	629	34	37.2	− 3.6	70	12	13	13	55	2.19	− 0.55	0.70	2.9	12	4	13	13	sw.	U. S. Weather Bureau.
Tiffin	Seneca	775	29	37.6	− 2.8	69	12	13	13	50	3.66	+ 0.93	0.78	6.5	13	9	10	11	sw.	Prof. T. H. Sonnedecker.
Toledo	Lucas	709	40	36.9	− 2.8	70	11	13	13	51	3.48	+ 0.83	0.88	3.3	15	10	7	13	sw.	U. S. Weather Bureau.
Upper Sandusky	Wyandot	854	28	36.5	− 4.5	69	12	11	13	52	3.94	+ 1.27	0.95	9.5	10	4	9	17	sw.	Robert E. Tracht.
Vickery	Sandusky	588	18	36.8	− 3.2	69	11†	13	13	51	2.42	+ 0.15	0.68	3.6	11	6	10	14	sw.	John W. Barr.
Wauseon	Fulton	780	39	35.5	− 1.6	68	11	12	13	51	3.83	+ 0.73	1.01	7.1	13	1	16	13	sw.	Thomas Mikesell.
Willoughby	Lake	649	17	.....	.....	.....	.....	.....	.....	.....	2.60	+ 0.13	0.70	3.9	13	3	4	23	w.	C. M. Richardson.
Pennsylvania.																				
Erie	Erie	658	38	38.0	− 3.1	70	11	16	13	53	3.14	− 0.47	0.88	12.2	19	1	6	23	sw.	U. S. Weather Bureau.
New York.																				
Adams Center	Jefferson	540	20	35.8	+ 1.1	68	12	3	17	38	4.40	+ 0.92	0.70	22.5	17	5	8	17	nw.	A. E. Cooley.
Angelica	Allegany	1,340	28	33.0	− 3.0	64	11	12	17	37	1.90	− 0.56	0.33	4.0	18	1	6	23	w.	Charles P. Arnold.
Appleton	Niagara	270	20	37.4	− 2.1	71	12	17	22	44	1.83	− 1.55	0.40	4.4	13	3	9	18	sw.	H. A. Van Wagoner.
Auburn	Cayuga	715	42	35.8	− 2.6	67	11	17	17	32	0.78	− 2.25	0.18	5.0	7	5	16	9	nw.	A. H. Underwood.
Avon	Livingston	585	16	35.5	− 2.9	69	11	14	23	37	1.32	− 0.83	0.44	2.5	7	8	3	19	.....	W. G. Markham.
Blue Mountain Lake	Hamilton	1,750	11	.....	.....	.....	.....	.....	.....	.....	3.37	+ 0.57	0.90	23.0	19	2	4	24	w.	B. F. Merwin.
Brockport	Monroe	537	15	35.7	− 2.8	69	11	15	22	35	2.41	− 0.34	0.67	8.5	20	4	12	14	w.	W. H. Lennon.
Buffalo	Erie	767	60	37.3	− 2.0	69	12	18	13	47	3.58	+ 0.23	0.78	13.6	16	2	10	18	w.	U. S. Weather Bureau.
Canton	St. Lawrence	448	17	32.7	− 1.2	67	11	7	17	38	3.23	− 0.18	0.67	10.2	17	2	7	21	sw.	Do.
Cape Vincent	Jefferson	246	6	35.8	.....	61	11	16	17	26	3.22	.....	0.90	.....	14	2	10	18	w.	J. Harry Grapotte.
Carvers Falls	Washington	243	13	34.6	− 0.7	68	12	16	23	31	2.02	− 0.20	0.75	0	3	11	7	12	s.	Washburne Fancher, C. E.
Chazy	Clinton	151	11	33.9	0.0	68	9	12	17	34	0.75	− 0.77	0.25	2.0	5	5	11	14	s.	W. R. North.
Dannemora	....do....	1,490	6	30.3	.....	62	12	9	17	29	2.04	.....	0.46	8.0	15	4	5	21	w.	Dr. W. N. Thayer.
Elba	Genesee	500	12	33.6	− 4.4	67	11	12	17	30	2.18	+ 0.11	0.30	17.0	10	7	9	14	sw.	Joseph S. Wilford.
Faust	Franklin	1,550	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Clara Lumber Co.
Fayetteville	Onondaga	530	10	36.5	− 1.4	69	11	8	17	30	1.71	− 0.90	0.56	2.0	14	8	6	16	nw.	Dana H. Wells.
Gabriels	Franklin	1,729	9	29.4[b]	.....	56	8	− 2	17	34	4.15	.....	0.70	32.8	15	5	5	20	w.	Gabriels Sanitarium.
Harkness	Clinton	622	9	33.2	− 1.6	63	12	13	17†	29	1.14	− 0.36	0.22	2.2	13	18	9	3	w.	J. W. Harkness.
Hemlock Lake	Livingston	900	13	36.2	− 2.8	63	11	18	13	30	0.74	− 0.95	0.74	T.	1	6	7	17	s.	D. H. Westbury.
Hunt	....do....	1,321	12	35.2	− 3.4	70	11	11	22	40	1.63	− 0.23	0.65	3.0	7	2	10	18	sw.	W. S. Barager.
Ithaca	Tompkins	928	33	36.0	− 1.6	67	12	20	13	42	1.28	− 1.30	0.36	2.3	9	6	5	19	se.	W. S. Weather Bureau.
Keene Valley	Essex	1,000	13	32.0	− 1.9	68	11	3	17	36	3.27	+ 0.65	0.61	8.5	15	6	8	16	nw.	E. R. Wells.
King Ferry	Cayuga	.....	11	.....	.....	.....	.....	.....	.....	.....	1.30	− 0.89	0.38	3.7	9	7	3	20	se.	Lucius A. Goodyear.
Lake George	Warren	350	14	35.8	− 1.2	64	12	12	17	34	3.17	+ 0.10	0.65	4.3	13	2	11	17	w.	Charles Forsell.
Lake Placid Club	Essex	1,864	3	26.0	.....	57	11	− 2	17	28	3.59	.....	0.45	31.3	20	4	12	14	nw.	Henry van Hoevenberg.
Le Roy	Genesee	920	21	34.6	− 3.2	69	11	14	13†	43	2.10	− 0.47	0.26	12.4	16	2	7	21	s.	F. W. Ball.
Lockport	Niagara	650	24	36.0[a]	− 2.8	68	12	13	22	42	2.09	− 0.28	0.43	10.1	14	5	5	20	sw.	J. E. Wakeman.
Lowville	Lewis	900	44	30.8	− 3.7	64	11	− 5	17	35	3.25	− 0.19	0.80	12.0	7	8	6	16	w.	Charles J. Rice.
Moira	Franklin	200	11	32.2	− 2.4	67	11†	14	16	35	2.20	− 0.28	0.75	8.5	10	6	14	10	w.	C. E. McBride.
Nehasane	Hamilton	1,750	3	28.0	.....	60	12	− 8	17	35	6.43	.....	0.95	47.3	24	5	10	15	s.	L. W. Brown.
North Lake	Herkimer	1,822	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John F. Redmond.
Ogdensburg	St. Lawrence	175	27	30.7	− 5.0	62	12	0	17	28	2.25	− 0.29	0.72	1.8	7	5	16	9	sw.	State Hospital.
Old Forge	Herkimer	1,733	3	28.8	.....	60	11	−10	17	35	6.54	.....	1.75	43.5	24	4	5	21	w.	Mrs. S. W. Nelson.
Oswego	Oswego	335	41	36.6	− 2.5	68	11	15	17	37	2.75	− 0.66	0.69	5.6	19	1	6	23	s.	U. S. Weather Bureau.
Otto	Cattaraugus	1,410	7	34.4	.....	64	11	9	13	52	3.02	.....	0.90	7.6	11	10	9	11	.....	William J. Wienk.
Palermo	Oswego	400	52	.....	.....	.....	.....	.....	.....	.....	4.19	+ 0.58	1.50	11.3	13	7	7	16	sw.	E. B. Bartlett.
Perry City	Schuyler	1,038	31	33.3	− 2.8	63	12	13	23	38	1.44	− 1.16	0.31	4.6	13	3	6	21	nw.	W. H. Jeffers.
Philadelphia	Jefferson	485	5	33.6	.....	68	11	2	17	35	4.41	.....	1.03	15.0	19	2	15	13	se.	E. D. Babcock.
Potsdam	St. Lawrence	300	35	33.6	− 0.1	68	12	9	17	44	3.37	+ 1.15	0.73	6.2	13	.....	.....	.....	.....	A. E. Sutherland.
Raquette Lake	Hamilton	.....	3	30.3	.....	60	10†	1	17	38	6.27	.....	0.98	33.2	20	5	1	24	w.	R. J. Dunning.
Rochester	Monroe	523	82	36.4	− 1.5	70	11	18	13	43	1.94	− 0.82	0.68	6.5	17	5	8	17	w.	U. S. Weather Bureau.
Romulus	Seneca	719	19	36.2	− 3.1	67	11	19	13†	30	0.81	− 1.63	0.25	2.7	6	3	7	20	s.	John H. Coryell.
Shortsville	Ontario	740	12	35.6	− 2.8	68	11	17	13	35	1.18	− 0.66	0.43	3.0	9	9	7	14	sw.	C. H. Latting.
Skaneateles	Onondaga	.....	16	.....	.....	.....	.....	.....	.....	.....	2.44	− 0.85	0.40	.....	21	.....	.....	.....	.....	Edward Conron.
Syracuse	....do....	597	9	35.8	− 2.9	67	11	16	17	41	1.49	− 1.21	0.46	6.6	17	3	5	22	s.	U. S. Weather Bureau.
Ticonderoga	Essex	344	13	34.6[b]	− 1.4	55	8	10	17	22	1.00	− 2.00	0.38	T.	6	8	5	17	s.	Miss Eva M. Delano.
Tupper Lake	Franklin	1,522	11	29.4	− 2.2	63	12	− 3	17	34	3.11	+ 0.81	0.77	29.5	17	6	6	18	w.	Rev. A. W. Maddox.
Volusia	Chautauqua	1,167	12	33.2	− 4.2	65	12	11	13†	48	3.84	+ 0.32	0.56	20.0	15	1	10	19	w.	Benjamin Breads.
Wana Kena	St. Lawrence	.....	1	29.1	.....	63	12	− 5	17	37	4.55	.....	0.76	35.2	18	2	5	23	sw.	J. Otto Hamele.
Watertown	Jefferson	737	19	34.7	− 1.4	67	11	11	17	32	4.51	+ 1.10	1.04	13.5	18	5	6	19	sw.	L. L. Allen.
Wedgwood	Schuyler	1,430	22	33.9	− 2.9	63	11	15	13	36	1.55	− 0.96	0.70	1.0	15	8	10	12	sw.	O. F. Corwin.
Westfield	Chautauqua	837	15	36.2	− 4.0	70	12	15	13†	50	3.57	+ 0.15	0.49	7.5	14	6	9	15	.....	John R. Rogers.
Youngstown	Niagara	.....	9	.....	.....	.....	.....	.....	.....	.....	1.65	.....	0.47	9.0	6	0	27	3	w.	B. V. Brookins.
Vermont.																				
Burlington	Chittenden	404	3	34.0	+ 0.3	65	12	12	17	33	1.56	− 1.02	0.60	3.9	15	2	7	21	s.	U. S. Weather Bureau.
Cornwall	Addison	517	17	35.4	− 0.7	67	12	11	17†	30	1.10	− 2.16	0.40	5.0	6	4	8	18	s.	C. H. Lane.
Enosburg Falls	Franklin	601	19	33.2	− 1.3	69	12	− 4	17	31	3.60	− 0.15	0.57	10.0	15	5	6	19	s.	L. H. Pomeroy.
Northfield	Washington	876	24	31.2	− 0.8	63	12	6	17	37	2.17	− 0.43	0.61	8.1	17	4	7	19	s.	U. S. Weather Bureau.
Wells	Rutland	750	19	32.8	− 2.1	62	12	4	17	28	2.44	− 1.30	0.58	7.0	8	3	11	16	sw.	E. R. Pember.

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1911. District No. 4, Lake region.*

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Minnesota.																															
Cloquet	Lake Superior					T.	.10			.10		T.	.10		.10			.60			.10						T.				1.10
Duluth	do	T.				T.	.40		.11	.39	.02	.26	.02		.61		.28	.34		T.			T.	T.			.15	T.	.01		2.59
Floodwood	do						.17			.22			.34				31			.12				T.		T.	T.				1.16
Stephens Mine	do			.22		.10				.21		.21	.06		.09	T.		.24					T.	T.	.09			.18			1.40
Two Harbors	do						.20			.35	.05	T.			.07	.06		.60										.07			1.40
Virginia	do			.22			.10			.35		.28	.17		.07			.13			T.		T.	.15			.11				1.58
Wisconsin.																															
Appleton	Fox	.03			.02		.36			.10	.18	.65	.01		T.	.01	.03	.80	T.				T.					.40			2.59
Ashland	Lake Superior	T.					.21			T.		.10	.12		.14	.05		.67	.03									.22	.12			1.66
Bayfield	do	.10					.40	.21		.08		.18	.48		.25			.67	.10					T.			T.		.56			3.03
Cecil	Fox	.07			T.		.42			.16	.41	.34	T.						T.	.42		T.	T.	.61	.14			.18				2.75
Crandon	Forest	T.					.65			T.					T.			1.20	T.												1.85
Florence	Menominee	T.					.58				.13	.37	T.		T.			T.		1.24								.11			2.43
Fond du Lac	Fox	.05			T.		.47	.05		.27		1.37	T.		.10			.62	T.		.15		T.					.60			3.68
Grand River Locks	do						.60	.10		.60	.30	1.68	T.		T.		.04	.70	T.		.12							.12			4.26
Green Bay	Lake Michigan	.02			T.		.18			.42	.01	.66	.01		.08	T.	.10	.49	.05	.03	.02		T.				.11	.36			2.54
High Falls	do	T.			T.		.48			.14	T.	.95	T.	T.	.05			1.40	.20									T.			3.22
Iron River	Lake Superior	T.					.40		T.	.05	.17		.01	.01	.01	.50		.40	.60		.10			T.	T.		T.	.01	.70			2.96
Kewaunee	Lake Michigan	.27					.21			.41		1.00	T.		T.	.23		.43	.16		.18								.45			3.34
Manitowoc	do	.02				.35				.50		.86			.05	T.		.80	T.	T.	.10		.05						.60			3.33
Menasha	Fox	.02			T.		.39			1.03		.87	T.		.04		.03	.19	.01		.04							.02	.09			2.73
Menomonee Falls	Lake Michigan	T.		T.			.50	.22		.24		.86	.14		.10		.02	.76	T.		.08		.04	.03					.32			3.31
Milwaukee	do	T.			T.		.51			.29	T.	.70	T.		.04		.07	.21	T.	.06	.02		.02					.02	.55			2.49
New London	Fox	T.					.49			.30	.38	.14	T.				.83	.21	T.	T.								.30	T.			2.65
Oconto	Lake Michigan					.25	.02			.37	.15	.20			.10	.20	.40	.20	T.										.30			2.19
Oshkosh	Fox	T.			T.		.58			.38	.30	.45			T.		T.	.55			.10								.60			2.96
Pine River	do	.01			T.		.72			.50	.41	.07	.03	T.	.01		.04	1.06	.02	.03	.05								.27			3.22
Plum Island	Lake Michigan	.30					.38			.05	.23	.52	.35	T.	T.			.70	.28										.50			3.31
Plymouth	do	.01			T.		.45	.04		.25	.22	1.20	.01		.05		.01	.59	T.	T.	.09		.18	T.					.55	T.		3.65
Port Washington	do	T.					.64			.33	.10	.42	.05		.20			.70			.30		.14						.40			3.28
Racine	do		T.				.50	.06		.03	.60	.16	.96					.77	T.		.08				T.				.40			3.56
Ripon	Fox	T.					.56	.10		.40	.35	.55			.01		T.	.71	.15		.15								.70	.10		3.78
Sheboygan	Lake Michigan	T.			T.		.56	T.	.20		.19	.47	1.22	T.	.10	T.	T.	.81	T.	T.	.10		.05						.30			4.00
Sturgeon Bay	do	.27			T.		.24	T.		.09	.24	1.21	.11		T.	T.	T.	1.26	T.				T.	T.				.16	.09			3.67
Superior	Lake Superior						.31	.09		.23	.06	.09	.05		.02	.09		.40	.03									.13				1.50
Waupaca	Fox	T.					.61			.65		.22	T.					.05	.81		.12								.23			2.69
Illinois.																															
Chicago	Lake Michigan	T.				.10	.31			.12	.01	1.48	.03		.06	T.	.28	.50	T.	.06	.03		.02	T.	.01	T.		T.	.26			3.27
Indiana.																															
Auburn	Maumee	.10	T.				.26	.21			.10		.80			.11		.29	.90		.18	.04		T.	.15	T.			.50	.03		3.67
Berne	do	T.					.50			T.	.04		.50	T.	.14	.04		.87			T.	.04		.44	.04				.16	.03		2.80
Elkhart	St. Joseph		.28				.43	.07			.19	.03	1.11			.12		.41			.12			.13	.16				.47			3.52
Fort Wayne	Maumee	.01	T.				.53			.04	.04	.63	.19		.20	.01		1.33		.08	.04	T.		.18	.04			.06	.36	.01		3.75
Hammond	Lake Michigan						.82								.02	.10		.88			T.									.10		1.92
Howe	St. Joseph		.10								.18				.20				1.10		.30			.10					.33		T.	2.31
South Bend	do	.02	1.75	T.			.18	.12		.17			1.04	.07			.18		.36	.21		.11	.05		.04	.08	T.			.50	.10		4.98
Whiting	Lake Michigan						.30				.19		.91		.10	.02		.45		T.	.07					T.			.27			2.31
Michigan, Upper Peninsula.																															
Baraga	Lake Superior	.10											.30				.10	.20	.50					.20					.30			1.70
Bergland	Ontonagon	.32					.18							.60				.65	.88	T.				T.				.27	.22	T.		3.12
Blaney	Manistique																														
Calumet	Lake Superior	.20					.73	.38		T.		.37	.32	.08	.02	.14		1.55	.32	.08	T.		T.	.12	T.			.12	.16			4.59
Chatham	do	1.05					.06	.09	.05	.09	.06	.64	.48		.16	.11		.21	.44		.18		.02		.12				.38			4.14
Deer Park	do	.30					.30	T.			T.	.80	T.	T.	T.																
Detour	St. Marys	.10							.30				1.00		.30	.24				.10	.18					.10			.15			2.47
Eagle Harbor	Lake Superior	.17						1.27		.04		.45		.20	.05	.12		.95	.35	T.	T.		T.	T.	T.			T.	.26			3.86
Escanaba	Lake Michigan	.06					.49			.03	.16	.45	.09	T.	.13	.01	.35	1.58	.04		T.		T.	T.	T.		T.		.04			3.43
Ewen	Ontonagon	.30	T.				.10	T.		T.		.11	.60	.80	.30		.10	.60	1.20		T.	T.	T.	.30				.30	.85			5.56
Grand Marais	Lake Superior																														
Green	do	.60					.50					.10	1.20					.10	.40									T.	T.			2.90
Houghton	do	.21					.82	.17		T.	.02	.46	.29	.02	.07	.08		.76	.46	T.	T.		T.	.05		.02	.08	.12	.04			3.67
Humboldt	Escanaba	.30					T.	T.		T.		1.00	.10		.05	.25		1.40	1.60										.30			5.00
Iron Mountain	Menominee	.07					.49			T.	.15	.09	.06		.40	.09		.62											.30			2.27
Iron River	do	T.					.40			.40	.30	.50	T.	T.	.40	.10		.60	.50	T.				T.				T.	.30	T.		3.50
Ironwood	Lake Superior	.98					.17	.13		T.		.31	.86			.37		1.22	1.63					.08				.15	1.04			6.94
Ishpeming	Escanaba	.40					.30	.10		.10	.05	.30	.02		.20	.25		.80	1.00	.13	T.		.01	T.				.04	.40	.05		4.15
Isle Royale	Lake Superior																														
Mackinac Island	Lake Huron	.25	T.		.15	T.	.47	.07	.11	.06		1.01	1.12	T.	T.	T.		.97	T.	T.		T.			T.							4.21
Maple Ridge	Lake Michigan	.40					.50	.10			.12	1.37	.10		.40			1.20	1.30										.40			5.89
Marquette	Lake Superior	.39	.02				.44	.15			.02	.17	.32		.18	.28	.16	1.01	.54	.04	T.		.01	.15	.19	T.	T.	.20	.41			4.68
Menominee	Menominee	T.					.24			.34		.32	T.		.10			.70	T.										.40			2.10
Munising	Lake Superior	.50	.14				.21	.37				1.01	.26		.05	.09		.79	.48					.07					.74			4.71
Newberry	Tequamenon	.13	.04				.25	.31				.25	.29	.06	.32	.08		.44	.50	.17	T.		.03	.04	T.	.03	.06	.03	.28			3.31
Powers	Lake Michigan																														
St. Ignace	Lake Huron	.35	T.		.10		.40	.05			T.	.42	.59	.21	.26	.04	T.	.50	.04	.80						.30			.29			4.35
Sault Ste. Marie	St. Marys	.04	.03				.40	.42		.02	.03	1.34	.24	T.	.20	.14		.24	.14	.01	.04		.05	.04	T.	.02	.03	T.	.12			3.55
Thomaston	Lake Superior	.40					.32					.60				.40		.20	1.00	.20				.10				.10	.30			3.62
Victoria	Ontonagon	.26			T.		.34	.22		T.		.10	.80	.01	.07	.55		.61	1.05	.03	T.			.02				.24	.70			5.00
Watersmeet	do	.09					.33	.08		.01	.10	.29	.20	T.	.15	.12		.87	.35	.07	T.			.05	T.			.10	.25	T.		3.06
Whitefish Point	Lake Superior	.09					.25	.48			.06	.08	.30	.46	.30	.36		.62	.54				.10	.05		.03			.60			4.32
Michigan, Lower Peninsula.																															
Adrian	Raisin	T.	.02				.60	.02					.64		1.40	.20		.90			.14			.90					.40			5.22
Allegan	Kalamazoo																														
Alma	Saginaw	T.	.04				.23	.12			.27	.05	.80	T.		.08		1.00	.06	.08	T.								.40	.05		3.18
Alpena	Lake Huron	.32	T.		T.		.37	.01		T.	.11	1.40	.20	.01	.02	.05	T.	1.08	.04	.01	T.		.30	.17	T.	.01	T.		.53			4.63
Ann Arbor	Huron	.01					.59	T.			.31	T.	.47	.05	.15			.71	T.		.10	T.		.09		.02			.44			2.94
Arbela	Saginaw	.07					.53				.31		.85		.13			.65	.14		.20								.52			3.40
Battle Creek	Kalamazoo	.30					.45			T.	.18		1.12	.06	.22	T.		.65	.05	T.	.16			T.	T.				.60	T.		3.79
Bay City	Saginaw						1.00				1.00		2.10	T.	.01	.10		.20	.05		.10								.90	.10		5.56
Benzonia	Betsey																														

TABLE 2.—*Daily precipitation for November, 1911. District No. 4*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Michigan, Lower Peninsula—Con.																																
Berlin	Clinton	T.	.06				.76			T.	.26		(*)	.08	.12	.07		.57	.09	.02	.21	T.		.10	T.	.01			.47	.03		3.45
Big Rapids	Muskegon	.06	.10		.17	.02	.32	.10			.21	.23	1.25					.74	.10	.30	.10	.05		.30					.40			4.45
Bloomingdale	Lake Michigan	T.	1.00				.50	.10		T.	T.	T.	.40	T.	T.	T.	T.	.60	T.		.50	T.	.28		1.00				.40	T.		4.78
Cadillac	Manistee	.10				.40	.21	.16			.22	.41	1.80	.30	.10	.10		.40	.28	.60				.80	.10				.45			6.43
Cassopolis	St. Joseph	.50						.02																					.05	.20		1.17
Charlevoix	Lake Michigan	.20					.60	.37				.28	1.03					.18											.30		.20	3.16
Charlotte	Kalamazoo						.24	.10					.73	T.	.30			.69			.13								.53			2.72
Cheboygan	Cheboygan	.35	T.	T.	T.		.30	.25				.60	1.20	T.	.60	.20		.60	.95		T.	T.	T.	T.		T.			.45			5.50
Clinton	Raisin						.51	.10			.40	T.	.51		.10	.05		.90			.14			.09		T.			.40			3.20
Coldwater	St. Joseph	T.	.02				.52				.40		.80		.02			1.20	T.		.17			.04	T.				.51	T.		3.68
Concord	Kalamazoo	T.					.56				.32		.25					.11						T.					.40			1.64
Croton	Muskegon	T.			T.		.51	.14		T.	.15	.31	1.70	T.	T.	.10		.45	T.	T.				.42	T.				.22	T.		4.00
Detroit	Detroit	T.	T.				.73	.01		.08	.21	T.	.70	.20	.23	T.		.63	.02		.14	T.		.28	.02	.03			.30			3.58
Durand	Saginaw																															
East Tawas	Lake Huron	.05					.35				.05	.50	.20		.10			.35	.05					.02					.55			2.12
Eloise	Rouge	T.					.62	.01			.30		.57	.04	.03	.25		.64	T.	T.	.20	T.		.19	.05	.10			.33			3.33
Flint	Saginaw		T.				.45	.08		.02	.35		1.03		.04			.50			.25								.30			3.02
Frankfort	Betsey	.30	.10				.30						1.24	.10	.30	.20		.32	.20		.10			.15			.45		.20			3.96
Ganges	Lake Michigan	.09	.30				.20	.08			.20	.11	1.50					.74			.05			.05	.51				.48			4.41
Gaylord	Cheboygan	.58	T.		.10	T.	.23	.32			.06	.22	1.40	.25	.20	.08	.05	.72	.39	.01	T.		.10	.30					.79			5.80
Gladwin	Saginaw						.30			T.		1.20	.40			T.		.30						.15								2.25
Grand Haven	Grand	.25	.05		T.		.39	.04		.07	.07	2.12	.15	.01	.14	.01		.91	T.	.05	.11	T.	.09	.14	.02				.31			4.93
Grand Rapids	do	.10	T.		T.		.40	.04		.22	.06	1.19	.69	.01	.06	.01		.61	T.	.01	.04			.09	.01				.34			3.88
Grape	Raisin		T.				.50	.01			.15		.89		.09	.04		.67			.18			.20	T.				.27	T.		3.00
Grass Lake	Grand	T.	.08				.48	.08			.30		T.	T.	.10	.35		.75	T.		.15			.08					.37			2.74
Grayling	Au Sable	.55			.52				.30			1.51	.25	.05	.19	.09		.70	.28	.08	T.	T.	.30	.27	T.		T.	T.	.40	.45		5.94
Harbor Beach	Lake Huron		.05				.30	.05				.10			.10			.35		.10										.20		1.25
Harrison	Saginaw						.67					.44	1.56																1.04			3.71
Harrisville	Lake Huron	.90	.20				.34	T.			.15	.10	.20		.20	.20		.30	.10					.20					.85			3.74
Hart	Pentwater	.30					.28	.30			.32		.45	.30	.10	.10		.30			.10							.10				2.65
Hayes	Pigeon		.20				1.15				.60		.65		.10	.10		.70	.20					.05					.40			4.15
Highland	Huron						.45	.31			.34		.48	.10	.10	.10	.10		.54			.10		.10		.05			.62	.10		3.49
Hillsdale	St. Joseph	T.	T.				.47	.08			.30	T.	1.05	.05	.20			.85			.20									.82		4.02
Holland	Lake Michigan	.28	.19				.34	.12				.07	1.19	T.	.25	.05	T.	.90	T.		.15	.10		.30	.10				.30	.02		4.36
Howell	Saginaw	.05					.63	.09			.22		.33		.07	T.		1.00	.02		.05			.02	.01	T.			.60			3.09
Ivan	Manistee	.35	.12		.02		.16	.14		.05	.27	.35	.60	T.	.20	.10		1.05	.10			.08		.20	T.				.60			4.39
Jackson	Grand	T.	.10				1.45				.21		.75		.03	T.		.74	T.		.10			.03	.05				.40	T.		3.86
Jeddo	St. Clair		.10				.70	T.			.30		.49	T.	.02	.12		.29	.10	T.	.10			.13		T.			.25	T.		2.60
Kalamazoo	Kalamazoo	.30					.45	.12			.16		.35		.15	.10		.65			.30			.15					.40			3.13
Lansing (Agr. Col.)	Grand	.03					.40	.03		.16	.02	.65	.55	.05	.11	.01		.76	.05		.05	.01			.01				.51			3.40
Lansing (capitol)	do	.03	.05				.32	.05			.22		.87	.05	.10	.02		.78	.05		.05	T.		T.	T.				.51	.07		3.17
Lapeer	Saginaw		T.				.75	.15				.80	T.		1.00			.55	1.00		.30								.62			5.17
Ludington	Pere Marquette	.05	.10				.15	.05			.07	.11	.49		.10	.20	.20	.15	T.					.05						.15		1.87
Luther	Manistee	.01	.02	T.	T.		.21	.18		T.	.31	.29	1.55	.01	.02	.11	T.	.80	.11	.17		.07	T.	.06	T.				.26	T.		4.18
Mackinaw	Lake Huron	.50			.10		.68	.10				.55	.20	.10	.60			.60								.10			.60			4.13
Mancelona	Lake Michigan	.80			.15		T.						.20	.40	.60	1.00		.60	.40	.10				.10					.30			4.65
Manistee	Manistee						T.	.45				.20	1.40		.40																	2.45
Marshall	Kalamazoo																															
Midland	Saginaw	T.					.20				.10		T.	T.		.20	.30															0.80
Morenci	Maumee						.64	.01			.17	T.	.80		.08	.06		1.06			.16			.15					.55	.01		3.69
Mount Clemens	Clinton	T.	T.				.79				.25		.52	.02	.01	.02		.58	T.		.11			.20	T.	.02			.30			2.82
Mount Pleasant	Saginaw		.10	.11			.07		.10										.16									.10				0.64
Muskegon	Muskegon		.10				.06				1.00		.06		.10	.20		1.50			.10			.06	.08				.30			3.56
Old Mission	Lake Michigan	.47	.09		.02		.19	.05			T.	1.25	.38	.08	.15	.10		.36	.17			.17		.02					.43			3.93
Olivet	Kalamazoo	.14					.49	.38		T.	.12	T.	1.13	.05	.26	.02		.81	.02	.01	.21			T.	.01				.48	.02		4.15
Omer	Lake Huron						.20						.05					.70	T.	T.				T.					.20			1.15
Onaway	Cheboygan	.60					.40	.50				1.80		.30	.30			.60	.20					.20					.50			5.40
Owosso	Saginaw	.02	.05				.46	.18			.35		2.04	T.	.02	.01		1.03	.04		.10			.07	T.				.53	.05		4.95
Petoskey	Lake Michigan	.20	T.	T.	T.		.80	.31			.02	.60	.21	.20	.30	.10	.10	.82	.13	.08	.04								.18	.10		4.19
Plymouth	Rouge						.80				.80		.45					1.10			T.			.40		T.						3.55
Pontiac	Clinton	.03	.02				.10	.04		.01	.33		.40	.09	.06	.11		.60	.10	.03	.12			.11		.03			.40			2.58
Port Austin	Lake Huron	.11					.38				.29		.54		.01			.20						.14					.39			2.06
Port Huron	St. Clair	.02					.75	T.		.09	.23		.38	T.	.13	.01		.52	.04	T.	.30			.20	T.	.02			.18	T.		2.87
Reed City	Muskegon	.13			.10		.15				.36	.68	2.00					.68	.40	.10									.50			5.10
Roscommon	Au Sable	.30	.25		.01		.25	.04			.10	.05	.02		.25	.15		.25	.05	.25				.10		.01			.28			2.36
Saginaw	Saginaw		.05				.35	.02			.31		.71		.05	.05		.53	T.	T.	.10	T.		.15					.37	.10		2.79
Saginaw West Side	do	T.	T.				.35	T.			.30	.03	.72	.03	.04	.04		.62	.02	.02	.05	T.		.02	.01	T.			.43	.08		2.76
St. James	Lake Michigan	.30					.50	.15				1.08	.30	.15	.30			.90	.28										.30			4.26
St. Joseph	St. Joseph	.80					.13			.04	.05	.40	.03	.01	.01	T.		.33			.07		.07	.06					.10	.05		2.15
Sandusky	Lake Huron	.02	.10				.60	.18			.35		.62			.20		.44	.16	.10									.26			3.03
Saranac	Grand	T.					.20	.17		T.	.23	.50	.72					.95				.05			1.10				.38	.06		4.36
South Haven	Lake Michigan		.40				1.00	T.		.60		T.	T.	T.				2.00						T.	T.			1.00	.01			5.01
Stanton	Grand																															
Thornville	Saginaw	.21					.78	.08					.05	.12	.22		.15	.25	.08		.40			.04					.20	.20	.15	2.93
Traverse City	Lake Michigan	.60									.50	T.	T.	.20	.20			.20	.15										.12			1.97
Vassar	Lake Huron		T.				.53	T.				.65		T.	.10			.81	T.	.10	T.			T.					.48	.10		2.77
Wasepi	St. Joseph		.20				.44				.40		.85		.26	.02		.90			.23			.08	T.				.78			4.16
West Branch	Lake Huron	.02					.12					.50							.40								.25					1.29
Woodlawn	Au Sable	.00	T.		T.		.32	.35			.11	.18	1.30	T.	.20	.10		1.20	.25	T.				.50		T.			.70			5.81
Ypsilanti	Huron	T.					.65	.05			.35	T.	.67	.05	.35			.75			.10			.28					.41			3.66
Ohio.																																
Akron ‖	Lake Erie	.05	.02				.04	.51			.02		.70	.07		.04			.26		.17	.03	T.		.03	.02				.05	T.	2.01
Benton Ridge	Maumee						.25					.05	.43		.30			.70			.30	.03		.60	.02				.35	.02		3.05
Bowling Green	Lake Erie						.28				.12		.62		.20	.15		.85			.20	T.		.40	.05				.46	T.		3.33
Bucyrus	Sandusky	T.	.60				.30			T.	T.	T.	.75		.20	T.		.50	.35	T.	T.			.45	T.				.05	.10		3.30
Cleveland (1)	Lake Erie	.08	.05				.19	T.		T.	.02	T.	1.34	.02	.20	.01		.92		T.	.18	.02		.27	.15	.02			.03	.06		3.56
Cleveland (2)	do	.03	.05				.21			T.	.02	T.	.66		.22			.62	T.		.20			.19	.14	.03			.03	.09		2.49
Conneaut	do	.07	.22				.23	.28			.11		.64	.30	T.			.58	.25	.16	T.			.04	T.	.06			.03	.08		3.05
Defiance	Maumee	T.					.61				.23		1.08		.12	.05		1.02			.11	T.		.27	.04				.04			3.57
Findlay ‖	do						.05	.18			.03		.60			.25			.95	.10	T.	T.		.25	.60				.31	T.		3.32
Fremont	Sandusky		T.				.29				.07		.51		.18			.59		.13	.03			.46	.08				.12	.07		2.53
Hedges	Maumee						.61				.12		.91		.40			1.20	.10					.50					.30			4.14
Hillhouse	Lake Erie	.07	.04				.15	.05		T.	.06	T.	.80	.33	T.	T.	T.	.60	.30	.30	T.	T.	T.	.20	T.	.84			.11	.11		3.46
Hiram	do	T.	.15				.45	.40		T.	T.	T.	.70		.14			.41	.29		.19	T.	T.	.28	.31	T.			.11	.08		3.51
Hudson	do	.02	.03				.38				.04		.88		.10			.33	.45		.22	.24		.10	.20				.15			3.14
Lima	Maumee						.07					.05	.55		.30			1.16	.08		T.			.73					.34	T.		3.27
Medina	Lake Erie		.08				.44	.07		T.	.05		.52		.08			.65	.19		.19	T.		.12	.14	T.			T.	.08		2.61
Montpelier	Maumee	T.	T.				.46				.16		.98		.30		.87	.95			.16			.18	.10				.46			4.12
Napoleon	do						.76				.17		1.05			.07		.86	.07		.15			.33	.20				.34	T.		4.00

TABLE 2.—*Daily precipitation for November, 1911. District No. 4*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
***Ohio*—Continued.**																																
New Bremen	Maumee						.31			T.	.17		.46		.05	.10		.70				T.		.47	T.				.18		T.	2.44
North Royalton	Lake Erie	.11					.46				.05		.06			.10		.62			.10			.10	.50				.13	T.		2.83
Norwalk	do						.30				.37		.57		.15			.60			.30			.38	.10				.09	.05		2.91
Oberlin	do		.11				.31	T.		T.	.03		.57		.10			.52			.30			.17	.22	.03				.23		2.59
Ottawa	Maumee						.38						.48		T.	T.		.74	.05		.17			.49	T.				.28	T.		2.59
Sandusky	Lake Erie		T.				.10	T.		T.	.06		.45		.10			.70		.01	.12	T.		.49	.03	.02			.08	.03		2.19
Tiffin	Sandusky	.01	T.				.56	T.		T.	.02	.01	.65		.20	T.		.78	.27		.16	T.		.65	.10				.15	.10		3.66
Toledo	Maumee	T.	T.				.82	.06		.02	.04	.02	.59		.19	T.		.88		.02	.09	T.		.41	.02	.02		T.	.27	.03		3.48
Upper Sandusky	Sandusky		T.				.35	T.			.10		.95		.30	T.		.95		T.		.10	T.	.75	.14	.10			.20			3.94
Vickery	Lake Erie		T.				.21				.07		.40		.15	.01		.68	.03		.17			.55	.05				.10			2.42
Wauseon	Maumee	T.					.63	.12			.16		1.01		.18	.02		.90			.15	.02		.19	.04	T.			.34	.07		3.83
Willoughby ‖	Lake Erie		T.				.16	.03		.02	.05		.70	.03	.14			.64	.06		.21			.41	.05	.10						2.60
Pennsylvania.																																
Erie	Lake Erie	.15	T.				.12	.10		.01	.07	T.	1.02	.07	.02	.04	T.	.61	.10	.10	.08	.03		.12	.20	.03			.13	.14		3.14
New York.																																
Adams Center	Lake Ontario	T.	.20		.11		.47	.21	T.			.04	.41	.70	.30	.20		.05	.46	.20	.30			T.	.16	T.	.20		.19		.20	4.40
Altman	do																															
Angelica	Genesee		.07				.07	.22	.01	T.	.04		.20	.14	T.	.02	.09	.15	.33	.06	.04	.05			.21	.05	T.		.08	.07		1.90
Appleton	Lake Ontario		.02				.11	T.			.08		.17	T.	T.	.27		.26	.40	.01	.06	T.		.09	.15	.05			.16			1.83
Auburn	Oswego		T.				.10	T.					.12		.18	.06	.06	.08			.18				T.	T.	T.		T.			0.78
Avon	Genesee	T.		T.			.33	.10					T.	T.		.05		T.	.44	.05	.05	T.	T.	.20	T.				T.	T.		1.22
Blue Mountain Lake	Raquette	T.	.20	T.	T.	T.	.20	.30	T.	.10	.20	.17	.15	.20	.20	.10	.10	.10	.10	.90	.10	.10		T.	T.	T.	T.		.05	.05	.05	3.37
Boonville	Black																															
Brockport	Lake Ontario	.10	.10				.18	.17	.07		.06		.07			.13	.05	.10	.67	.01	.10	.05		.05	.10	.05	.11		.19	.05		2.41
Buffalo	Lake Erie	.01	.03	T.			.12	.09		T.	.18		.65	T.	.08	.36	T.	.50	.30	T.	.22	T.		.07	.03	.58	.02		.34	T.		3.58
Canton	Grass	T.	.21				.29	.24	.01		.08	T.	.51	.10	.05	.11	T.	.12	.57	T.	.08	T.		T.	.06	.09	.27		.32	.12	T.	3.23
Cape Vincent	St. Lawrence		.05				.10	.46			.10		.45			.18		.05	.90	.02					.24	.02	.25		.33	.07		3.22
Carvers Falls	LakeChamplain							.75								.52			.75													2.02
Chazy	do		.10								T.		.25			.10			.10										.20		T.	0.75
Dannemora	do	.03	.10					.31	.24		.03		.12	T.		.21			.46	.02	T.	T.			.06	.05	.08		.18	.14	.01	2.04
Elba	Lake Ontario		.10				.28	.12			T.		.20			.30	T.	T.	.20	T.	.30				T.	.30	.30		.08			2.18
Faust	Raquette																															
Fayetteville	Oswego		.06				.10	.26			.06		.56	.01	T.	.06	.02	T.	.18	T.	.02	.10			.12		.04		T.	.12		1.71
Gabriels	St. Regis		.26					.48	.32		.08		.10	.43		.12	.12		.20	.86		T.			.20	.04	.23		.70	.01		4.15
Harkness	LakeChamplain	.10	.10					.21	.10	.03	.02		.22	.07		.01			.14						.04		.01		.09			1.14
Hemlock Lake	Genesee							.74						T.											T.		T.					0.74
Hooker	Lake Ontario																															
Horse Shoe	St. Lawrence																															
Hunt	Genesee						.25	.29					.10					.65		.20		.10							.04			1.63
Ithaca	Oswego		.03				.36	.05		T.	T.	T.	.25	T.	.09		.01	.25		T.	T.	.02	T.	T.	.22	T.			T.	T.		1.28
Keene Valley	Ausable	.17	.43				.61	.32	.18		.04		.32	.21	T.	.09	.10	T.	.18	T.	T.	.04			.12	T.	T.	T.	.38	.08	T.	3.27
King Ferry	Oswego		T.				.15				.05		.38			.06		.34			.07	.03		.12	.10							1.30
Lake George	LakeChamplain		.03				.65	.11			.05		.35	.31	.02	.05			.02	.20	T.				.11				.43	.24	T.	3.17
Lake Placid Club	Ausable, W. Br.	T.	.45	.09			.10	.25	.15		.10		.12	.40		.28	.45		.15	.10	.05	.08			.15	.05	.09		.28	.10	.15	3.59
Leisers Mill	Black																															
Le Roy	Genesee		.15				.17	.26		T.	.04		.22	T.	.03	.20	T.	.22	.22	.07	.20	.07		.02	.10	.07	T.		.06	T.		2.10
Lockport	Lake Ontario	.01	.12				.04	T.	.08		.12		.24			.24		.13	.43	T.	.13	T.		*	.20	.07			.28	T.		2.09
Lowville	Black		T.					.75			.10			.80		.40		T.	.70	T.	T.				T.	T.	.20		.30	T.	T.	3.25
Moira	St. Lawrence		.05				T.	.45	T.				.03	.05		.20	T.		.75				T.	T.	.12	T.	.05		.40	.10		2.20
Nehasane	Black	T.	.07	.03			.10	.80	.34		.11	.01	.50	.95	.07	.39	.22	.02	.74	.45	.04	.10	.03		.33	.04	.23	T.	.19	.55	.12	6.43
North Lake	do																															
North Osceola	Lake Ontario																															
Ogdensburg	St. Lawrence		T.				.65		T.		.10		.40	T.			T.	T.	.72	T.	T.	T.		.10		T.	.18		.10			2.25
Old Forge	Black	.03	.01	.02			.24	.80	.55		.11		.55	1.75	.09	.61	.30	.05	.75	.07	.01	.07	.01		.29	.02	.11		.06	.01	.03	6.54
Oswego	Lake Ontario	T.	.03	.03			.60	.10			.08		.31	.02	.12	.30	.01	.24	.28	.14	.05	.06		T.	.18	.02	.12		.06	T.	T.	2.75
Otto	Lake Erie		.20				.90	.70			T.		.30	.30	T.		.09		.04		.20	.10							.16	T.	.03	3.02
Palermo	Lake Ontario	.03			.05	.20				.10	.60		1.50		.10	.50		.80	.25	.02	.01	T.			T.				T.	.03		4.19
Perry City	Oswego	.02	.08				.26	.09			.03		.31	.05		.10			.18		.04	.06			.17	.05						1.44
Philadelphia	St. Lawrence	.03	.08				.17	.32	.03		.13	T.	.73	.05	.04	.09		T.	1.03	.21	.07	.02			.07	T.	.59		.41	.32	.02	4.41
Potsdam ‖	Raquette	.38	.16					.46	.08			.12	.02	.43		.20			.73			.06			.06		.15			.52		3.37
Raquette Lake	do	.09	.11					.86	.13		.16		.16	.98	.14	.29	.36		.79	.08	.11	.37		T.	.40	.09	.21		.21	.67	.06	6.27
Rochester	Genesee	.07	.05				.25	.06	.04	T.	.02		.18		.03	.15	T.	.56	.17	T.	.13	T.		.02	.09	.05	.03		.04	T.		1.94
Romulus	Oswego		T.				.16	T.			T.		.13	.04	T.	.20		T.			.03				T.	.25						0.81
Scottsville	do																															
Shortsville	do		.02				.15	.14			T.		.11		T.	T.		.05	.43	.05	.10				T.	.13						1.18
Skaneateles	do	.15		.02			.02	.24	.06		.03		.20	.15	.40	.05	.07	.10	.06	.03	.18	.05	.10	.10	.15	T.	.13	T.	.15	T.	T.	2.44
Syracuse	do	T.	.01	T.			.04	.03	T.	T.	T.		.46	T.	.07	.06	.02	.30	.11	.01	.10	.05	T.	.04	.10	.01	.04		.04	T.		1.49
Ticonderoga	LakeChamplain		.14								.16				.10				.38			.14							.08			1.00
Tupper Lake	Raquette		.05				.02	.16	.07		.03		.08	.13		.15	.13		.20	.77		T.			.10	.04	.03		.70	.33	.12	3.11
Volusia	Lake Erie	.19	.24				.14	.56			.02		.52	.41	T.	T.		.25	.25	.40	T.	.25			.33	.08			.10	.10		3.84
Wanakena	Oswegatchie		.10				.19	.66	.14		.06		.76	.14		.25	.09		.69	.64		.10			.18	.03	.12		.22	.12	.06	4.55
Wards Creek	Raquette																															
Watertown	Black	.02	.04					.38			.21	.01	.80	.03	.03	.19		.04	1.04	.43	.16	.06			.18		.35		.28	.26	T.	4.51
Wedgwood	Oswego		.03				.70	.03	.03	T.	.03	.03	.22		.03	.01		.06	.25	.01	.01				.10	T.			.01	T.		1.55
Westfield	Lake Erie	T.	T.				.17	.41			.11		.41	.22	T.	.21		.17	.49	.29	.08	T.		T.	.37	.17			.38	.09		3.57
Youngstown	Lake Ontario	.07											.38		.47						.37					.21			.15			1.65
Vermont.																																
Burlington	LakeChamplain	.01	.03				.07	.20			.01		.60	T.	.02	.04		.03	.27	T.	T.	.03		T.	.07	T.	.01		.15	.02	T.	1.56
Cornwall	do	T.	.10					.20					.20		.40					T.					.05				.15			1.10
Enosburg Falls	do	.04	.12					.31	.10		.10	.01	.57	.37		.42	T.		.54	.04	T.	T.			.27		.07	T.	.25	.39	T.	3.60
Northfield	do	.03	.01				.42	.20	T.		.04		.49	.12	.06	.16	.03	T.	.19	.01	T.	.02	T.		.11	T.	.02		.25	.01	T.	2.17
Wells	do	T.	T.				.28				T.			.39		.41			.58			.14			.12	.14			T.	.28		2.44

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for November, 1911. District No. 4, Lake region.*

Date.	Duluth, Minn.		Wisconsin.						Chicago, Ill.		Fort Wayne, Ind.		Upper Michigan.										Lower Michigan.					
			Florence.		Green Bay.		Milwaukee.						Escanaba.		Ewen.		Houghton.		Marquette.		Sault Ste. Marie.		Alpena.		Battle Creek.		Cadillac.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	25	13	29	18	34	18	36	22	41	26	44	27	32	18	28	17	25	22	30	20	31	19	35	25	42	30	36	25
2....	33	13	31	17	33	18	34	21	36	23	34	24	35	16	30	19	35	25	33	19	35	19	35	18	32	22	36	19
3....	37	13	39	17	33	21	36	23	37	25	39	21	38	20	38	14	41	25	42	23	40	23	42	20	40	23	38	22
4....	32	26	34	26	35	31	38	32	42	34	45	34	36	28	33	23	34	28	34	25	37	29	41	31	41	28	36	29
5....	39	25	37	29	42	33	49	35	51	39	51	38	43	31	38	19	42	30	41	30	38	31	41	34	49	36	39	32
6....	37	32	39	29	47	40	50	40	54	45	61	43	44	37	38	32	39	35	41	33	43	37	47	40	52	41	45	34
7....	37	31	36	34	41	31	44	36	49	40	49	38	43	33	34	32	39	35	41	34	42	38	44	38	49	40	46	36
8....	40	29	43	26	45	29	47	34	47	38	46	33	42	28	42	23	43	32	44	32	40	30	43	34	48	32	45	32
9....	38	31	40	31	45	37	49	42	52	40	54	32	43	40	40	32	44	37	44	35	41	30	45	35	50	32	43	30
10....	38	14	41	34	45	38	54	46	61	51	62	52	47	39	43	28	46	28	46	39	50	35	57	40	59	45	52	38
11....	32	11	58	33	66	30	73	30	71	32	70	55	53	39	38	30	42	21	60	29	58	35	60	42	70	52	64	40
12....	11	− 2	44	7	30	6	30	16	32	13	55	11	41	6	32	0	21	12	29	7	55	13	57	16	69	18	66	16
13....	12	− 2	12	− 1	26	5	27	9	28	12	23	10	19	3	10	− 2	15	8	15	4	21	8	23	13	21	13	19	9
14....	24	7	28	10	28	24	30	23	33	26	31	21	28	19	29	5	26	13	28	15	29	17	30	23	29	19	26	17
15....	17	− 1	25	13	28	15	31	17	33	23	33	24	27	12	28	10	23	16	29	16	32	16	34	23	32	26	30	22
16....	25	4	25	1	31	11	37	16	36	23	31	22	30	11	21	− 4	27	12	27	15	29	15	33	23	29	14	31	19
17....	30	18	29	22	37	28	46	31	52	33	51	30	34	30	31	21	33	26	33	26	29	24	41	32	49	26	37	24
18....	25	11	34	21	34	21	31	20	33	23	35	26	31	23	31	22	30	24	30	24	26	22	38	25	45	25	40	24
19....	25	5	27	20	26	14	32	18	36	22	34	23	29	19	27	8	24	21	30	21	31	25	33	26	30	26	29	24
20....	22	8	28	4	30	18	33	24	36	28	36	28	32	16	27	− 8	28	21	30	19	34	17	36	19	33	26	31	13
21....	26	17	29	17	32	19	33	24	35	28	36	25	31	21	25	− 1	28	18	30	23	29	11	32	19	35	27	32	17
22....	32	24	33	11	37	20	38	28	43	32	40	27	38	21	34	− 6	35	19	38	24	34	26	35	16	35	25	33	19
23....	26	3	31	16	32	23	35	24	40	26	40	27	33	25	32	19	31	16	33	24	34	21	35	28	36	31	34	28
24....	20	3	28	15	26	14	28	19	32	24	30	23	27	19	27	7	27	16	25	18	21	11	28	20	31	27	34	22
25....	38	19	40	20	33	21	39	26	42	28	37	23	32	21	35	19	38	22	39	22	29	20	32	20	36	25	30	21
26....	35	24	38	27	36	24	43	32	48	34	48	32	37	25	35	21	38	32	37	33	35	29	38	31	41	32	37	25
27....	32	13	40	30	38	28	46	32	48	39	48	37	37	35	38	23	36	24	36	30	37	30	42	34	43	33	41	29
28....	13	3	36	18	34	18	38	22	42	25	47	25	36	21	29	13	24	14	30	17	37	10	39	21	44	33	41	20
29....	34	6	33	5	23	6	24	9	29	17	30	17	37	8	31	1	30	13	36	12	29	8	33	15	34	22	30	18
30....	37	17	38	15	35	17	34	17	35	20	32	16	40	16	35	7	37	22	38	18	35	13	36	22	32	19	32	22
Mns..	29.0	13.8	34.2	18.8	35.4	21.9	38.8	25.5	41.9	29.0	42.4	28.1	35.8	22.7	32.0	14.1	32.7	22.2	35.0	22.9	35.4	22.1	38.8	26.1	41.2	28.3	37.8	24.2

Date.	Lower Michigan.						Ohio.								Erie, Pa.		New York.								Vermont.			
	Detroit.		Muskegon.		Saginaw, West Side.		Cleveland.		Lima.		Sandusky.		Toledo.				Buffalo.		Canton.		Rochester.		Syracuse.		Burlington.		Northfield.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	43	32	43	29	41	31	47	36	46	37	47	32	48	32	44	40	42	32	32	28	38	32	36	32	34	28	44	28
2....	34	25	40	27	35	22	36	30	40	25	35	28	37	26	41	32	39	26	28	22	33	28	37	26	28	24	30	19
3....	40	24	40	32	43	24	41	29	38	22	42	26	43	24	40	34	42	32	42	21	43	31	42	31	42	27	41	24
4....	42	32	42	31	43	29	47	34	45	31	48	34	47	33	46	33	47	38	44	30	48	32	48	34	44	30	46	22
5....	48	39	45	33	46	36	48	40	45	36	49	40	50	39	49	39	48	39	45	29	47	36	44	32	48	28	48	20
6....	53	40	50	35	50	38	58	43	60	43	60	44	61	42	57	42	55	42	50	33	54	38	53	39	47	29	44	19
7....	47	39	48	40	49	40	51	43	57	43	51	41	49	41	54	43	55	42	54	41	54	41	55	39	54	41	55	38
8....	44	37	49	35	49	34	43	37	45	32	44	37	44	37	44	35	43	39	41	36	43	36	43	38	44	39	43	36
9....	51	39	55	35	49	33	50	36	51	30	49	35	48	36	48	35	50	35	44	30	49	39	49	36	44	34	42	29
10....	60	48	70	45	58	44	62	49	61	48	64	49	63	48	60	45	54	46	51	36	58	45	55	42	47	37	45	33
11....	65	52	70	46	70	48	70	50	66	55	70	54	70	53	70	50	66	53	67	35	70	44	67	45	57	36	56	28
12....	65	16	70	19	67	19	70	18	67	17	70	15	66	15	71	18	69	22	65	27	65	22	64	23	65	32	63	30
13....	21	12	30	11	24	11	22	15	20	11	23	13	23	13	23	16	24	18	27	19	23	18	24	19	32	24	30	21
14....	30	21	33	25	28	21	32	21	32	20	32	21	31	21	34	19	36	23	33	19	34	23	33	23	31	24	29	17
15....	35	23	33	28	36	25	38	29	40	27	38	28	37	26	38	31	36	28	36	28	36	29	34	25	38	29	37	26
16....	32	20	30	22	34	20	31	28	32	18	31	25	31	20	35	30	30	22	30	12	30	23	32	23	36	21	33	16
17....	52	29	40	28	46	28	53	29	53	29	52	30	51	28	51	28	49	22	29	7	34	22	36	16	28	12	31	6
18....	37	28	33	29	42	26	39	29	53	23	39	28	38	28	51	30	50	29	42	29	45	30	45	32	42	27	42	22
19....	34	28	33	28	33	27	33	28	35	22	33	28	34	29	36	27	36	30	32	27	35	30	34	28	38	30	35	27
20....	33	28	34	30	35	26	38	29	37	25	37	30	37	29	39	29	33	30	37	27	35	30	36	30	37	30	37	23
21....	37	27	35	28	36	25	34	33	35	26	34	29	38	31	35	30	31	24	30	23	33	26	32	26	32	25	32	23
22....	37	31	38	28	37	25	37	32	38	22	37	28	37	28	35	30	35	23	29	16	32	20	31	23	32	19	29	15
23....	36	31	40	30	36	30	42	32	37	31	40	31	40	33	43	30	44	28	40	22	43	27	42	24	37	19	35	12
24....	31	26	35	28	32	24	35	28	34	27	33	28	33	28	37	30	37	25	38	23	39	26	40	25	37	28	38	27
25....	35	26	35	26	35	26	35	25	35	25	36	26	38	25	34	26	37	23	28	14	32	22	31	20	28	18	27	14
26....	42	31	42	31	44	28	41	34	45	24	45	35	44	34	40	33	40	36	35	28	39	31	38	30	34	24	34	15
27....	48	36	48	34	50	32	52	36	47	31	53	38	51	36	53	35	53	36	38	26	54	34	50	32	42	32	41	26
28....	47	28	42	30	45	29	49	32	44	31	48	33	48	32	49	36	49	34	48	38	54	42	54	43	49	38	50	25
29....	33	22	34	27	34	15	32	24	33	24	33	23	36	23	36	26	40	26	42	19	42	28	43	25	46	24	50	17
30....	30	20	35	30	37	22	32	20	37	17	33	20	32	20	32	23	34	30	34	26	33	28	33	27	35	24	31	17
Mns..	41.4	29.7	42.4	30.0	42.0	27.9	43.0	31.6	43.6	28.4	43.5	31.0	43.5	30.3	44.2	31.8	43.5	31.1	39.7	25.7	42.5	30.4	42.0	29.6	40.3	27.8	39.9	22.5

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1911.

DISTRICT No. 5, UPPER MISSISSIPPI VALLEY.

GEORGE M. CHAPPEL, District Editor.

GENERAL SUMMARY.

The month takes rank as one of the notably cold Novembers of recent years. Not since 1896 has the temperature averaged so low, and, with that exception, the month was the coldest of its name since 1880. There was much cold, windy, and generally disagreeable weather, and many days were of a decidedly wintry character, the conditions partaking largely of the nature of a winter month. The temperature variations were often sudden and of a marked character, and the extremes, both high and low, in the southern part of the district were almost if not quite of a record-breaking nature. The month was somewhat wetter than usual and a high percentage of the precipitation was in the form of snow. As a result of the adverse conditions prevailing generally, much inconvenience and great monetary loss was sustained in many parts of the district. In the North Dakota area the month was especially severe. Delay was experienced in railway traffic, much grain was left uncut and unthrashed, and stock suffered considerably; in southern Wisconsin and northern Illinois severe local storms wrought great damage on the 11th, and in the latter State and in the Indiana area the work of harvesting the corn crop progressed but slowly, and at the close of the month much of it remained in the fields. The wet weather in those States caused a great quantity of corn to mold and rot.

The most important event of the month was the severe cold wave of the 11th and 12th. It goes on record as one of the most notable cold waves that ever visited the district. The area most affected included the southern quarter, but severe conditions prevailed elsewhere, only to a lesser degree. In southern Wisconsin, eastern Iowa, and northern Illinois the cold wave was ushered in by a series of violent local storms, some of which were of a tornadic character. In Rock County, Wis., 8 persons were killed, a dozen or more injured, and property damaged to an estimated extent of $1,000,000; in Cass County, Ill., the financial loss is placed at about $125,000, but no lives were lost, and in several other counties in that State the loss was considerable. A detailed report on some of those storms appears elsewhere.

TEMPERATURE.

The month was cold throughout the district, and in most parts of it decidedly so. At only a few stations did the deficiency in the mean temperature amount to less than 3°, while over a very considerable part of the district it exceeded 6°, reaching more than 10° over a part of the North Dakota area and in northern Minnesota. The average temperature for the district, 27°, is about 6.6° less than the normal, and about 3° less than the average last year. As usual, the warmest part of the district was southern Illinois, where at a few stations the mean temperature was above 40°, Cobden, with a mean of 43.2°, being the warmest station. Northward from southern Illinois the mean temperature decreased at a uniform and rather rapid rate to the International Boundary, where the average temperature for the month was close to 10°, Hannah, N. Dak., the coldest reporting station, having a mean of 10.9°.

There was a remarkable difference in the highest temperatures experienced during the month in the southern and northern parts of the district. The 11th, with a maximum temperature well above 70° over a large part of the former section, was one of the warmest, if not the warmest, November day on record for that part of the district. At some of the warmest stations the highest temperature exceeded 80°, Hannibal, Mo., reporting the extreme reading observed during the month, 82°. From the latitude of northern Iowa northward the temperature did not, as a rule, rise above 50° at any time during the month, and over a considerable area in northern Minnesota the highest temperatures barely exceeded 40°. A fact worthy of note in this connection was the remarkable contrast in temperature conditions on the 11th. With a summer warmth prevailing in the southern part of the district, accompanied by temperatures of record-breaking character, this day in parts of the North Dakota area was extremely cold, the highest temperatures scarcely exceeding zero.

Over practically all the North Dakota area the 4th was the mildest day of the month; in Minnesota the highest temperatures in most instances were experienced between the 4th and 10th; in Iowa they occurred generally on the 10th, 11th, 25th, 26th, or 30th, while over the remainder of the district they were recorded almost universally on the 11th. Five cold waves swept over the district during the month. Only two, however, were of widespread character and of sufficient strength to affect the entire district, the remaining three being confined, in their greatest intensity, to the region north of the latitude of St. Paul. The cold wave of the 11th–12th was much the severest of those experienced during the month. In many respects it was one of the most remarkable cold waves in the history of the Weather Bureau. For magnitude and rapidity the fall in temperature has seldom, if ever, been equaled in the last 40 years, over the area most affected. The morning of the 11th in southeastern Iowa, the Missouri area, southern Wisconsin and Illinois was like April or May, with all the accompaniments of showery conditions at that time of the year. By midday the temperature was in the seventies over most of the area named, and the weather seemed hot and sultry. The wave of falling temperature entered northwestern Illinois about 12 noon, and 10 hours later had completed its southward sweep to the Ohio River, causing drops in temperature of from 60° to 68° in about 18 hours, which is one of the most phenomenal falls on record in this district.

The cold wave of the 14th–15th affected only the northern part of the district with marked severity, but it caused some very low temperatures in North Dakota and

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Minnesota, a few stations experiencing readings lower than 30° below zero. Angus, Minn., reported a temperature of 36° below zero on the 15th, which is within 3° of the lowest temperature on record for Minnesota for November. It is probable that this is the lowest temperature ever recorded in the district so early in the season.

Like its predecessor, the next cold wave that visited the district, that of the 22d–23d, affected only the region north of St. Paul, Minn. Some stations in that territory experienced the coldest weather of the month at that time.

The cold wave of the 27th–28th overspread the entire district and relatively was most severe in the more southerly parts of the district. In the Missouri area the minimum temperatures observed on the morning of the 29th were within a degree or two of the lowest on record for November. There was a return to more seasonable conditions on the last day of the month, and the weather at that time was exceptionally pleasant in all parts of the district. At a few stations it was the mildest day of the month.

PRECIPITATION.

More than the usual amount of precipitation occurred over the district, considered as a whole, but the excess was not marked save in southern Wisconsin, northern Illinois, and extreme eastern Iowa, where the month was one of the wettest Novembers of record. At Dubuque, Iowa, the precipitation was the greatest of any November in the last 20 years. The average amount for the district was 2.02 inches, which exceeds the normal by about 0.40 inch. The heaviest fall reported was 5.47 inches, at Dixon, Ill., and the least was 0.10, at Pratt, N. Dak. In general, less than 1 inch occurred along and near the western boundary of the district as far south as Iowa, but thence eastward and southward there was a progressive increase. Over a considerable area in northern Illinois, where the amounts were greatest, more than 5 inches was reported. Much, if not all, the precipitation over the northern half of the district was in the form of snow, of which the average fall in that section was about 10 inches. At a few stations in northern Wisconsin, where the snowfall was heaviest, more than 2 feet were measured, and Vudesare in that region reported 37.6 inches. Only a trace of snow fell at two or three stations in Iowa, where the fall was lightest.

The distribution of precipitation was quite favorable in point of time. The 2d, 25th, and 30th were perhaps the only days without an appreciable amount in some part of the district. The most important wet periods covered the 5th–6th, 8th–11th, 17th–19th, 22d–23d, and 26th–28th. Snow flurries occurred generally over the northern States of the district on the 1st, as the result of the approach of a cold high pressure area from the Northwest. This high was of exceptional magnitude and was accompanied, at Des Moines, Iowa, on the 2d by the highest barometric reading ever recorded at that station in November. Mostly fair weather was the rule from the 2d until the afternoon of the 5th, when a well-defined storm began to affect the weather of the district, causing general precipitation during the next 24 hours. The fall for the entire storm was heaviest at Cairo, Ill., and the amounts diminished regularly toward the north. Another period of unsettled and stormy weather set in on the 8th and proved the most important of the month, culminating in severe local storms and a cold wave of marked severity, mention of which is made elsewhere. Excessive precipitation, the only occurrence of the kind during the month, was reported from stations in Illinois on the 11th. A brief period of fair weather on the 12th and 13th was terminated on the 14th as the result of the approach of a disturbance from the North Pacific. The principal effect of this storm, however, was to cause snows north of the latitude of St. Paul. By the morning of the 17th, another storm center had advanced from Colorado to eastern Iowa, having been attended during the preceding 24 hours by light to copious precipitation over practically the entire district. This was one of the chief disturbances of the month. The 17th, under the influence of southerly winds, was one of the mildest days of the month in the eastern and southern parts of the district. Quickly following the last-named depression was another of minor intensity, which traversed about the same path as its predecessor. Quite general snows occurred on the 18th and 19th as a result of its presence. The next disturbance of importance manifested itself by the morning of the 22d, when it existed in trough-like form, stretching from Manitoba to Texas. Its eastward passage was marked by the occurrence of general precipitation in the southern States of the district, but only small and scattered amounts were reported in the north. The last storm of the month was of a slow-moving character. On the 26th, it was present over South Dakota, causing snow on that date over the North Dakota area and in Minnesota, but the remainder of the district did not come under its influence until a day or two later, so far as precipitation is concerned. Not until it had moved well to the eastward did any amounts of importance occur, when they were in the form of snow. This was the principal snow storm of the month over some of the southern sections. There was a return to fair weather on the 30th, and that day, Thanksgiving Day, was one of the most pleasant of the month in all sections.

RIVERS.

The Mississippi River fell steadily throughout the month, the stage at Dubuque decreasing from 11.8 feet on the 1st to 3.5 feet on the 30th. At Keokuk the stage permitted resumption of work on the power dam, which had been retarded by the high water. The river closed at Fort Ripley on the 12th, which is three weeks earlier than in 1910. At Prairie du Chien, Wis., and Le Claire and Davenport, Iowa, the river froze on the 25th, but the ice bridge opposite Davenport was broken during the high temperature of the 26th. At Dubuque the river remained open throughout the month, but heavy ice was running from that point to below Prairie du Chien during the last half. The Wisconsin River was open at Muscoda and Portage at the close of the month. The Illinois River was above flood stage during a part of the month. No damage resulted at Peoria, but at La Salle there was a considerable loss. About 15 per cent of the corn crop in the valley was destroyed. The Fox River at Ottawa, Ill., was frozen over on the 30th.

MISCELLANEOUS.

Northwesterly winds prevailed over the greater part of the district, and the wind movement was greater than usual for November. The highest velocity reported was 54 miles an hour at Hannibal, Mo., on the 11th in connection with the severe storm of that date.

There does not appear to have been a decided excess or deficiency in the sunshine anywhere in the district, but the amount for the district, as a whole, was probably somewhat less than normal. The average number of clear days was 10; partly cloudy, 7; cloudy, 13.

SEVERE LOCAL STORMS.

Mr. Clarence J. Root, section director of the Illinois section, reports as follows on the storm of the 11th:

Very unusual weather conditions obtained on the 11th and 12th. The 11th was characterized by May-like temperatures, maximum readings of 72° to 80° being general. These temperatures broke all November records at about half of the stations in northern Illinois and at a number in the central counties. Cold-wave warnings for Illinois were issued with the forecast. The influence of the cold wave was felt over the northern and the west-central part of the State during the afternoon, but it did not reach the southern and eastern sections until evening. In the extreme northwest part of the State the temperature began to fall at about noon, but the "shift" did not reach the Ohio River until 9.40 p. m., or nearly 10 hours later. The beginning of the cold wave was accompanied by thunderstorms, and, in many localities, by hail and severe wind storms, some of which are said to have been of a tornadic nature. The most destructive storms occurred in Cass and Mason Counties between 4 and 5 p. m. The afternoon storms in the northwestern half of the State were more destructive than the evening winds in the other sections. In southern Illinois the temperature was above 70° in the early evening, but so rapidly did it fall in all parts of the State that the rain changed to snow in a few hours and winter weather prevailed by morning, with minimum temperatures of 8° near the Wisconsin line and of 11° within 35 miles of the Ohio River. This represents a fall of 60° to 68° in about 18 hours. The official in charge at St. Louis states that a daily range of 60° was never before equalled in any month. These minimum temperatures are probably the lowest on record for so early in the season. The violent storms caused great damage. Buildings were struck by lightning, structures damaged or destroyed by the wind, and in some places considerable loss ensued from hail. Poultry and young stock were frozen to death. Electric services suffered the most general loss. Wires and poles were blown down and wires broken by falling limbs or from the sudden contraction due to the falling temperature. These storms were somewhat unusual when the time of year is considered.

Reports given below cover the storms as far as available information will permit.

Virginia, Cass County: Virginia is the county seat, and a city of about 2,000 population. On November 11, at about 4 p. m., a severe storm struck the city. The postmaster reports that there was a tornado cloud, although the trees mostly fell to the northeast on both sides of the storm track. The storm started about 8 miles southwest of the city, moved northeast, and extended to a place 10 miles northeast of Virginia. Telegraph and telephone poles were snapped off, large trees broken or torn up by the roots, wires were a tangled mass of junk, roofs of buildings were scattered everywhere, and the whole business portion of the city was one scene of desolation and destruction. There is hardly a place from the courthouse square westward that did not receive some damage. The southeastern part of the city escaped with slight damage. The Methodist church, a modern brick structure, sustained the greatest loss. The roof and part of the walls were destroyed. Other buildings that suffered greatly are the Hotel Mann, county jail, opera house, and many business houses and lumber yards. More than 100 properties were considerably damaged. The financial loss is estimated at $125,000 to $150,000. Ten or twelve persons were injured, some of them seriously. It is said that two or three invalids died from shock a few days after the storm.

Mason County: The storm occurred in the eastern part of the county, between 4.30 and 5 p. m. It moved from south to north. A number of houses were blown down and one farmer suffered a loss of $7,000. The fire bell tower in Mason City was destroyed.

The postmaster at Easton reports that the loss in his vicinity is about $20,000, and that two persons were killed, Neota Prater, an infant, and Sarah Henninger, an elderly woman, and nine were injured.

Dupage County: Several farm buildings were damaged in the vicinity of Naperville and Eola. A funnel-shaped cloud was reported moving from the southwest; loss $10,600 on buildings, household goods, and live stock. This storm caused some damage in the vicinity of Aurora, Kane County.

Sangamon County: Some telephone poles and wires were blown down at Springfield, but the greatest damage was caused by the storm in the southwestern part of the county. At Auburn houses and buildings were injured, and throughout the rural districts much damage ensued to farm buildings. Some horses and stock were killed, and 1 man lost 300 chickens. The hail was severe, and as many as 15 windows were broken in a single house. The hail was said to be as large as 5 inches in circumference. Great damage was done at the State game farm. Thousands of pheasants and other wild birds were killed at this place.

Illinois Traction System: This line encountered much difficulty with trolley wires throughout the system. Near Mackinaw the wind tore up 64 poles. Wires were snapped in hundreds of places.

The following are extracts taken from the reports of our observers:

La Salle: Mr. S. P. Peterson, observer. The high wind on the 11th crippled the telephone and telegraph service. It also leveled much of the standing corn to the ground, so that when the heavy rain and sleet came in the evening many ears of corn were beaten into the ground, causing the corn to mold. Lightning destroyed about $15,000 worth of property on the 11th.

The following reports are from cooperative observers:

Dakota, Rev. G. W. Kerstetter: The storm of the 11th was very severe to the north and west of us.

Marengo, Mr. J. W. James: Fifty-one years' record, the fall of 60° in temperature, 11th to 12th, was a record breaker for any one day's time here.

Galva, Prof. F. U. White: Many buildings were struck by lightning on the 11th.

Oregon, Mr. Samuel Ray: On the 11th hail, rain, and tornadic wind destroyed many buildings. Insurance settling at Oregon agency, $40,000.

Ottawa, Miss Maud M. Harris: Considerable damage by storm. Barns struck by lightning and destroyed.

Roberts, R. E. Bradbury: Storm that passed through here destroyed several buildings.

Tiskilwa, F. I. Smucker: In the north part of the county several houses and barns were unroofed or entirely demolished. No persons were killed, but some were injured.

TORNADO NEAR DAVENPORT, IOWA, ON NOVEMBER 11, 1911.

By J. M. SHERIER, Local Forcaster.

Just at the beginning of the remarkable fall in temperature that culminated in the severe cold wave of the 11th instant, a moderately destructive tornado first appeared at the farms of Mr. Claus Jacobs and Mr. John Balzer, 1 mile west of Davenport, on the Locust Street Road, and moved about 7 miles in a generally northeasterly direction to the southwest corner of Sheridan Township, having been last observed about 1 mile east of Mount Joy.

Both Mr. Jacobs and Mr. Balzer have said that the storm began at their homes shortly before 1 p. m., though neither could state the time exactly. Hon. Bruce T. Seaman, residing about one-half mile beyond the site of the Green Tree Tavern, nearly 4 miles northwest of this city, where the destruction was greatest, gives the time of arrival of the tornado as 1.05 p. m. Mr. John Hansen, living about three-fourths of a mile east of Mount Joy, states that the funnel-shaped cloud reached his place at 1.30 p. m.

About 20 to 30 minutes before the time of occurrence of the tornado two distinct cumulo-nimbus clouds were observed in the western and southwestern portions of the sky. At the Davenport station nothing remarkable about the cloud formation was noticed, except that some rapidly flying fracto-stratus clouds had a reddish or copper-hued tint which, in contrast with the dark thunderheads, gave the western half of the sky an unusually forbidding appearance. At the Balzer, Jacobs, and Hansen homes the characteristic funnel cloud was distinctly seen, which moved northeasterly, its tip approaching the ground until it appeared to be almost in the tops of low trees and then receding rapidly from the earth. Mr. Seaman noticed no resemblance to a funnel but states that the cloud marking the vortex was in the form of a light gray column, about 2 rods in diameter, in which the whirling motion was distinctly visible. No lightning was seen in the vortex by any of the observers interviewed.

Thunder was first noted at the station at 12.50 p. m., followed by rain at 1.11 p. m. Along the path of the tornado there was first a gusty wind, such as usually precedes a thunderstorm, then rain, followed by hail ranging in size from one-tenth to seven-tenths of an inch in diameter and lasting less than a minute, being succeeded immediately by the destructive wind. Only 2 or

3 minutes elapsed between the beginning of the gust and the arrival of the vortex. The total amount of precipitation at the station during the afternoon and evening was 0.72 inch, of which 0.66 inch, in the form of rain, was registered before 5.25 p. m. At that hour the rain became mixed with sleet, which was followed later by snow.

In addition to the whirling motion observed within the pendant cloud, the passage of a vortex over the Seaman farm was plainly indicated by the twisting off of trees several feet above the ground and by the wrenching off of young limbs only 1 or 2 inches in diameter.

The width of the storm track at the Balzer and Jacobs places was about 50 feet and the total amount of damage there is estimated at about $250.

Mr. Seaman was a heavy loser, the damage to his house and farm buildings amounting to about $3,000. At his place the width of the storm track was about 450 feet, with the residence near the center of the path of destruction. The roof of the house was slightly raised and sprung, without being destroyed, and the chimneys on the main part of the building were thrown down. The strength of the upward movement within the vortex was shown by the lifting of the tank house high into the air, where it was blown to pieces. Boards from the tank house were carried into a cornfield nearly half a mile almost due east of the house and the tank itself, weighing 1,700 pounds, was thrown against the hog house. The smokehouse was wrecked; the garage was moved eastward about 25 feet from its foundation; cupolas were torn from the barns and the hog house, and the horse and cattle barn, while still standing, was so badly twisted and sprung that it will be rebuilt. The windmill tower was reduced to a tangle of angle iron and guy rods, and a heavy farm wagon that was standing in front of the hay barn was picked up and thrown upon the wreckage of a new corn crib about 200 feet to the northeastward.

After the storm, a pigeon that had been decapitated and a live chicken that had lost both eyes were found in the yard. It was at first supposed that the neck of the pigeon had been twisted off by the action of the storm, but it seems more probable that the bird's head was taken away by some bit of flying wreckage. Within the house, a trap door leading to the attic was pushed aside and light articles, such as straw hats, that were in the upper hall, were taken into the garret.

At the Hansen and Vogt places, about 3 miles northeast of the Seaman homestead, where the vortex seems to have approached the earth for the last time, the total amount of damage is estimated at about $100.

Miss Linda Jacobs, daughter of Mr. Claus Jacobs, was slightly injured by flying glass when the windows of her home were blown in, but no loss of life was occasioned by the storm.

TABLE 1.—*Climatological data for November, 1911. District No. 5, Upper Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Dakota.																				
Amenia	Cass	954	14	17.9	− 7.5	50	5	− 15	15†	50	0.75	+ 0.07	0.40	7.5	2	14	4	12	nw.	C. E. Wood.
Bottineau	Bottineau	1,638	16	12.2	−10.2	50	4	− 18	15	47	0.28	+ 0.33	0.08	10.5	6	8	8	14	nw.	A. J. Carlson.
Cando	Towner	1,488	10	15.8[f]	−11.7	56[f]	4	− 27[f]	15	44[f]	0.28	− 0.27	0.24	.....	2	.....	.....	.....	.....	E. T. Judd.
Crosby	Divide	.....	5	14.7	.....	50	4	− 15	10	35	0.57	.....	0.19	5.2	8	18	7	5	sw.	H. C. Kashau.
Devils Lake	Ramsey	1,482	6	15.4	− 7.2	50	4	− 20	15	30	0.47	− 0.24	0.17	5.9	10	8	11	11	w.	U. S. Weather Bureau.
Donnybrook	Ward	1,760	12	16.0	−13.4	53	4	− 17	15	36	0.72	− 0.02	0.30	5.6	7	16	3	11	nw.	C. J. De Vore.
Dunseith	Rolette	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. H. Trowbridge.
Edmore	Ramsey	1,524	6	15.1	.....	53	4	− 33	15	55	0.20	.....	0.20	2.0	1	17	5	8	n.	H. R. Aslakson.
Fessenden	Wells	1,610	....	12.9[d]	.....	47[e]	6†	− 12[d]	13†	39[e]	0.37	.....	0.20	2.5	4	14	7	9	nw.	G. T. Seymour.
Forman	Sargent	1,249	17	19.2	− 7.0	57	4	− 24	23	49	1.22	+ 0.70	0.62	13.2	4	12	4	14	nw.	A. Maltby.
Grafton	Walsh	827	20	15.6	− 6.0	47	4	− 31	15	40	0.57	− 0.22	0.11	6.8	8	11	5	14	s.	A. R. T. Wylie.
Granville	McHenry	1,504	5	18.2	.....	52	4	− 14	15	37	0.36	.....	0.20	5.0	4	.....	.....	.....	.....	W. A. Christianson.
Hannah	Cavalier	1,568	6	10.8	.....	50	4	− 33	15	38	0.80	.....	0.40	8.0	3	.....	.....	.....	nw.	J. Moffatt.
Hansboro	Towner	.....	3	13.8	.....	50	4	− 20	15	34	0.40	.....	0.14	5.3	5	17	3	10	nw.	Geo. Dale.
Hillsboro	Traill	901	6	18.4	.....	47	4†	− 15	15	36	1.32	.....	0.50	12.5	11	10	11	9	nw.	F. E. Mayall.
Lakota	Nelson	1,579	5	12.7	.....	50	4	− 26	15	39	0.52	.....	0.12	11.5	9	14	9	4	nw.	C. R. Pettes.
Langdon	Cavalier	1,615	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. Woolner.
Larimore	Grand Forks	1,134	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. M. Freeman.
Lisbon	Ransom	1,091	7	18.0	−13.2	50	7	− 9	12	42	1.00	+ 0.31	0.30	10.0	4	15	3	12	nw.	H. K. Adams.
McKinney	Renville	1,640	17	15.8[d]	− 7.1	41[e]	8	− 18	16	39[e]	0.45	− 0.19	0.20	4.5	3	8	14	8	nw.	N. P. Swenson.
Manfred	Wells	1,605	10	15.1	.....	51	4	− 21	23	51	0.77	.....	0.20	6.6	9	8	12	10	nw.	P. B. Anderson.
Mayville	Traill	975	15	18.8	− 7.9	49	4	− 16	15	32	1.03	+ 0.30	0.60	.....	5	17	3	10	nw.	W. C. Gould.
Minot	Ward	1,557	13	19.7	−11.7	53	4	− 11	24	52	0.46	− 0.27	0.15	4.0	8	18	3	9	w.	J. J. Bates.
Minto	Walsh	820	18	15.2[d]	− 8.9	46[f]	4	− 24	15	33[f]	0.64	+ 0.03	0.27	4.5	5	17	2	11	nw.	S. S. Marsh.
Oriska	Barnes	1,270	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. J. Taylor.
Park River	Walsh	998	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. Heyward.
Pembina	Pembina	789	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. W. Shumaker.
Power	Richland	1,020	19	17.4	− 8.5	53	4	− 14	15	41	0.72	+ 0.14	0.60	7.5	6	9	6	15	nw.	J. A. Power.
Pratt	McHenry	.....	6	15.7	.....	48	4	− 22	15	40	0.10	.....	0.10	.....	1	24	0	6	nw.	W. B. Ahern.
Towner	....do	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. Bagley.
University	Grand Forks	830	19	16.5	− 9.1	46	4	− 24	15	39	1.10	+ 0.34	0.40	9.5	6	13	7	10	nw.	U. S. Weather Bureau.
Wahpeton	Richland	962	19	14.6	−13.6	40	7	− 10	15	35	0.48	− 0.05	0.45	4.5	4	7	9	14	nw.	E. G. Burch.
Walhalla	Pembina	966	7	16.6	.....	49	4	− 21	15	34	0.90	.....	0.30	9.0	4	16	6	8	w.	Ivan DeL. Lee.
Westhope	Bottineau	.....	5	15.0	.....	51	4	− 19	15	40	0.25	.....	.....	2.5	....	0	27	3	nw.	W. A. Meddaugh.
Willow City	....do	1,471	18	13.8[d]	− 6.9	54	4	− 25[e]	15	42[e]	0.52	+ 0.06	0.20	4.5	5	9	17	4	nw.	M. A. Ostby.
Minnesota.																				
Albert Lea	Freeborn	1,229	20	24.6	− 7.0	44	8	0	12	35	0.48	− 1.07	0.42	1.0	4	5	14	11	nw.	Edward Carey.
Alexandria	Douglas	1,391	17	18.4	− 9.7	45	5†	− 6	12	35	0.96	+ 0.23	0.40	10.5	9	8	5	17	nw.	P. O. Unumb.
Angus	Polk	870	9	14.4	.....	45	4†	− 36	15	42	1.17	.....	0.40	11.0	7	17	4	9	n.	John Nadvornik.
Bagley	Clearwater	.....	5	18.0[e]	.....	52[e]	9	− 30[e]	15	42[e]	0.92	.....	0.70	9.5	7	5	13	12	w.	Jens Nelson.
Baudette	Beltrami	1,084	1	17.8	.....	45	5	− 17	15	31	0.87	.....	0.28	5.5	13	13[a]	0[a]	16[a]	nw.	C. S. Dahlquist.
Beardsley	Bigstone	1,090	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. J. Buckley.
Beaulieu	Mahnomen	1,200	9	16.4	.....	47	6	− 30	15	41	1.30	.....	0.60	11.0	5	11	10	9	n.	Dr. P. A. Slattery.
Bemidji	Beltrami	1,400	9	.....	.....	.....	.....	.....	.....	.....	0.79	.....	0.41	.....	6	.....	.....	.....	.....	C. W. Warfield.
Bird Island	Renville	1,039	21	20.5	− 9.8	46	5	− 9	24	41	1.02	+ 0.16	0.54	6.6	8	6	3	21	nw.	Dr. F. L. Puffer.
Caledonia	Houston	1,179	18	24.8	− 8.2	44	5†	3	29	36	1.64	− 0.07	0.48	3.7	9	6	2	22	nw.	W. D. Belden.
Campbell	Wilkin	984	2	16.0	.....	50	7	− 10	15†	39	1.98	.....	0.60	17.5	12	9	0	21	nw.	J. T. Neisess.
Cass Lake	Cass	1,300	4	.....	.....	.....	.....	.....	.....	.....	0.79	.....	0.40	7.5	4	.....	.....	.....	.....	C. W. Burns.
Collegeville	Stearns	1,282	18	22.6	− 8.5	42	10	− 2	12	32	1.31	+ 0.47	0.45	18.2	9	14	4	12	nw.	Fridolin Tembreull.
Crookston	Polk	863	21	16.1	− 9.2	46	8	− 20	15	34	1.58	+ 0.89	0.30	14.5	10	15	2	13	s.	A. G. Andersen.
Detroit	Becker	1,364	15	14.8	−11.6	47	4	− 22	15	38	1.22	+ 0.50	0.40	11.5	5	13	1	16	nw.	G. W. Peoples.
Ely	St. Louis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. E. F. Stidd.
Fairmont (near)	Martin	1 240	24	24.5	− 6.7	48	30	− 1	12	33	1.02	− 0.30	0.50	6.5	7	11	9	10	nw.	W. F. Wherland.
Faribault	Rice	1,003	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. A. B. Moulton.
Farmington	Dakota	902	23	22.6	− 8.2	44	10	− 8	24	35	1.12	− 0.19	0.18	7.9	10	6	4	20	nw.	E. D. Akin.
Fergus Falls	Otter Tail	1,210	19	19.4	− 8.6	45	8	− 8	15	36	1.56	+ 0.77	0.50	13.4	16	8	11	11	nw.	C. E. Kissinger.
Fort Ripley	Crow Wing	1,136	4	17.6	.....	42	8	− 15	24	40	1.17	+ 0.47	0.35	10.0	9	12	0	18	nw.	J. J. Tucker.
Fosston	Polk	1,289	2	16.0	.....	50	5	− 26	15	38	1.01	.....	0.30	.....	7	19	6	5	nw.	O. N. Hem.
Glencoe	McLeod	1,000	15	24.0	− 8.0	44	4	− 4	12	39	0.70	− 0.34	0.60	7.0	2	10	16	4	nw.	F. B. Reed.
Grand Meadow	Mower	1,338	23	24.7	− 5.9	46	10†	− 3	12	32	1.64	+ 0.28	0.73	6.0	15	6	8	16	nw.	C. F. Greening.
Gull Lake Dam	Cass	1,215	....	15.6	.....	42	9	− 14	21	36	1.15	.....	0.22	15.2	11	10	3	17	s.	G. A. Williams.
Hallock	Kittson	815	12	15.3	−10.6	45	5	− 32	15	36	0.90	+ 0.26	0.25	4.0	6	20	0	10	n.	D. A. Robertson.
Halstad	Norman	870	5	14.6	.....	47	4†	− 17	15	45	0.70	.....	0.36	2.5	4	19	0	11	nw.	A. G. Holstrom.
Hinckley	Pine	1,050	6	20.9	.....	43	8	− 10	19	34	1.50	.....	1.00	15.0	4	1	6	23	n.	W. R. Newman.
International Falls	Koochiching	1,112	3	18.2	.....	45	5†	− 15	15	40	2.05	.....	1.20	15.5	5	11	6	13	w.	Rees Roe.
Itasca State Park	Clearwater	1,500	....	19.6	.....	47	30	− 25	15	45	0.94	.....	0.50	7.0	5	9	9	12	nw.	J. A. Stillwell.
Lake Crystal	Blue Earth	.....	4	24.7	.....	46	8†	1	12†	36	0.37	.....	0.27	1.0	2	12	3	15	nw.	W. P. Cobb.
Leech Lake Dam	Cass	1,301	23	17.6	− 8.1	43	25	− 17	16	35	1.19	+ 0.13	0.37	11.9	9	5	7	18	sw.	Hans. Olson.
Littlefork	Koochiching	.....	.....	17.4	.....	43	5	− 21	16	40	1.07	.....	0.45	5.0	5	10	7	13	.....	O. C. Olson.
Long Prairie	Todd	1,299	19	18.8	− 8.9	50	2	− 10	15†	40	0.60	− 0.34	0.40	6.0	2	11	3	16	nw.	A. L. Sheets.
Lynd	Lyon	1,175	19	22.6	− 8.6	50	5	− 4	12	38	0.42	− 0.53	0.17	5.0	6	11	10	9	nw.	J. W. Rouse.
Mankato	Blue Earth	758	12	.....	.....	.....	.....	.....	.....	.....	0.27	− 0.97	0.16	1.5	2	7	2	21	sw.	Sadie H. Blake.
Mapleplain	Hennepin	1,023	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. W. Richards.
Milaca	Mille Lacs	1,072	13	18.8	−12.4	42	7†	− 10	24	42	.....	.....	.....	.....	.....	5[b]	11[b]	12[b]	nw.	C. H. Foss.
Milan	Chippewa	955	17	18.7	−10.7	45	4†	− 9	18†	39	1.35	+ 0.42	0.80	13.5	5	3	16	11	nw.	O. K. Opjorden.
Minneapolis	Hennepin	918	20	23.0	− 9.1	44	9	0	24	35	1.25	+ 0.07	0.80	12.1	11	7	4	19	w.	U. S. Weather Bureau.
Montevideo	Chippewa	900	21	21.0	− 9.6	53	9	− 5	24	37	2.26	+ 1.42	1.08	23.5	9	13	6	11	nw.	L. G. Moyer.
Moorhead	Clay	935	30	17.2	− 7.2	48	4	− 12	15	34	1.03	+ 0.05	0.42	9.0	10	10	8	12	nw.	U. S. Weather Bureau.
Mora	Kanabec	.....	6	20.2	.....	43	7†	− 15	19	38	1.78	.....	0.60	16.0	13	12	3	15	nw.	Hans Peterson.
Morris	Stevens	1,170	26	19.0	− 9.3	45	7†	− 8	18	35	1.37	+ 0.70	0.90	13.3	9	14	3	13	nw.	D. T. Wheaton.
New London	Kandiyohi	1,215	17	21.2	− 8.6	42	6†	− 10	24	40	0.85	− 0.02	0.80	16.0	2	8	12	10	sw.	Harold Swensen.
New Richland	Waseca	1,180	17	24.8	− 7.7	44	5	0	12†	38	0.38	.....	0.28	1.0	3	7	10	13	nw.	N. O. Tyrholm.
New Ulm	Brown	791	31	23.2	− 8.6	46	7	− 1	24	39	0.83	− 0.29	0.15	5.6	11	7	0	23	nw.	A. L. Henle.
Osakis	Douglas	1,343	4	18.8	.....	43	8	− 8	24	35	0.77	.....	0.26	11.7	6	11	3	16	nw.	J. B. Johnson.
Park Rapids	Hubbard	1,426	21	15.9	− 9.7	43	8	−14	15†	37	0.89	− 0.12	0.15	5.7	11	9	1	20	nw.	Dr. P. A. Walling.
Pine River Dam	Crow Wing	1,251	24	17.4	− 9.6	40	7†	−16	16	35	0.46	− 0.55	0.20	7.5	5	5	14	11	e.	Neil McKay.
Pokegama Falls	Itasca	1,280	24	18.6	− 6.1	40	8	−14	19	35	0.37	− 0.47	0.17	7.1	9	5	16	9	nw.	A. L. Mampel.
Redlake	Beltrami	1,152	3	17.8	.....	48	6	−27	15	36	1.31	.....	0.64	14.6	4	6	11	13	w.	A. C. Goddard.
Red Wing	Goodhue	680	15	.....	.....	.....	.....	.....	.....	.....	1.34	−0.36	0.54	7.6	11	9	1	20	nw.	Louis Bach.
Redwood Falls	Redwood	1,050	4	23.0	.....	55	9	− 3	24	38	1.30	+ 0.34	0.40	11.0	9	12	6	12	nw.	N. B. Anderson.
Reeds Landing	Wabasha	681	16	.....	.....	.....	.....	.....	.....	.....	1.09	− 0.33	0.52	9.5	11	8	0	22	nw.	John Deschneau
Rochester	Olmstead	991	6	23.8	.....	46	9	− 1	25	42	1.63	.....	0.50	16.3	5	8	4	18	nw.	S. R. Case.
Roseau	Roseau	1,040	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. Waag.
St. Charles	Winona	850	20	24.7	− 6.7	46	10	− 3	24	34	1.74	+ 0.50	0.70	11.6	8	5	8	17	se.	S. W. Gleason.

TABLE 1.—*Climatological data for November, 1911. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota—Contd.																				
St. Cloud	Sherburne	1,020	33	20.9	− 8.8	41	10	− 8	24	34	1.65	+ 0.59	0.45	20.3	10	6	14	10	nw.	J. H. Capser.
St. Paul	Ramsey	837	40	22.8	− 8.1	45	9	− 2	24	35	1.12	− 0.18	0.66	12.1	11	4	12	14	nw.	U. S. Weather Bureau.
St. Peter	Nicollet	825	17	24.4	− 8.8	46	25	− 6	24	41	0.20	− 0.93	0.10	2.0	2	10	4	16	n.	State Hospital.
Sandstone	Pine																			A. D. Hale.
Sandy Lake Dam	Aitkin	1,234	18	19.6	− 7.7	40	8	−12	16	35	0.63	− 0.63	0.16	5.7	7	11	5	14	nw.	A. Newstrom.
State Sanatorium	Cass		3	18.9	.....	47	9	−12	15	41	2.21	.....	1.40	12.9	10	10	10	10	w.	Dr. L. B. Oblinger.
Stillwater	Washington	694	6								1.08	.....	0.50	9.6	5	10	4	16	s.	Oscar Ostrom.
Taylors Falls	Chisago	759	4	22.4	.....	42	7	−14	19	35	1.30	.....	0.60	12.0	3	10	4	16	n.	Minneapolis General Electric Co.
Thief River Falls	Pennington		1	.....	.....	.....	.....	−24	15	.....	0.70	.....	0.21	9.0	6	8	7	15	n.	E. W. Lown.
Tracy	Lyon																			B. L. English.
Warroad	Roseau	1,069	2	16.6	.....	47	4	−23	14	40	1.95	.....	1.10	14.0	5	17	1	12	w.	J. H. Sawyer.
Winnebago	Faribault	1,100	12	25.0	− 9.8	47	30	0	12	43	0.48	− 0.90	0.28	T.	3	9	8	13	se.	H. H. Haight.
Winnibigoshish	Itasca	1,300	23	19.2	− 6.8	42	7	−14	16	36	1.22	+ 0.13	0.51	12.0	9	10	5	15	nw.	John Duncan.
Winona	Winona	700	15	27.2	− 6.4	47	10	2	19	31	1.17	− 0.28	0.46	7.5	11	5	12	13	nw.	P. C. Myers.
Worthington	Nobles	1,592	16	22.6	− 9.0	47	7	− 4	12†	39	0.24	− 0.96	0.09	1.5	4	11	3	16	nw.	M. P. Mann.
Zumbrota	Goodhue	917	15	23.4[e]	− 8.7	45[e]	10	− 5[e]	24	33[e]	0.67	.....	0.40	3.0	5	7	12	11	nw.	W. C. Rowell.
South Dakota.																				
Milbank	Grant	1,148	20	18.7	−11.5	50	5†	− 6	12†	39	1.28	+ 0.52	0.90	9.0	8	11	2	17	nw.	I. T. Patridge.
Wisconsin.																				
Antigo	Langlade	1,489	17	24.8	− 6.6	60	11	− 2	16	33	2.34	.....	1.40	17.4	10	8	7	15	w.	Elton C. Larzelere.
Barron	Barron	1,115	20	22.4	− 7.1	44	8	−10	16†	29	1.39	+ 0.01	0.50	13.2	8	7	15	8	sw.	Wm. A. Kent.
Beloit	Rock	750	45	32.4	− 4.5	74	11	6	29	56	4.13	+ 2.22	1.35	7.5	7	11	0	19	w.	Smith Observatory.
Big St. Germain Dam	Vilas	1,590	1	24.0	.....	42	8†	−12	16	47	4.12	.....	1.20	19.5	10	10	10	10	sw.	Oscar Brehmer.
Brodhead	Green	812	13	31.0	− 6.9	74	11	1	29	35	4.02	+ 2.21	1.00	4.0	6	10	8	12	nw.	Hector D. Kirkpatrick.
Burnett	Dodge	880	7	28.4	.....	71	11	1	29	33	3.22	.....	0.74	5.1	13	5	7	18	nw.	Geo. W. Smith.
Cottage Grove	Dane	888									3.93	.....	0.79	7.3	13	8	12	10	sw.	John E. Mellish.
Darlington	La Fayette	867	5	30.0	.....	72	11	0	29	40	3.25	.....	0.80	2.0	6	7	4	19	nw.	S. P. Nelson.
Deerskin Dam	Forest	1,625	1	22.6	.....	54	11	− 5	12	50	3.66	.....	1.40	25.5	7	11	6	13	w.	Wm. E. O'Neal.
Delavan	Walworth	920	20	30.2	− 3.4	73	11	2	29	31	3.83	+ 1.98	1.03	8.0	9	7	10	13	sw.	Elwood S. Austin.
Dodgeville	Iowa	1,116	11	29.8	− 5.1	66	11	− 1	29	35	.....	.....	.....	.....	.....	10[a]	4[a]	15[a]	sw.	Thomas Gibbon.
Downing	Dunn	983	9	22.2	.....	44	10	−10	19	31	2.10	.....	1.20	20.0	3	2	4	24	w.	Eugene F. Stoddard.
Eau Claire	Eau Claire	800	20	25.2	− 6.9	44	10	− 2	19	29	1.79	+ 0.12	0.54	13.2	12	3	11	16	nw.	Robert D. Whitford.
Grand Rapids	Wood	1,021	12	25.2	− 7.5	63	11	− 3	29	39	2.46	+ 0.78	0.73	10.2	9	10	2	18	sw.	Willis B. Raymond.
Grantsburg	Burnett	1,095	20	20.5	−10.3	44	7	−12	16†	39	2.57	+ 1.13	1.50	24.7	8	13	1	16	sw.	Theodore Olsen.
Hancock	Waushara	1,091	19	27.5	− 5.5	66	11	− 1	29	32	2.54	+ 1.14	0.75	10.0	9	3	9	18	nw.	Frederick B. Hamilton.
Hatfield	Jackson	973	17	24.2	− 8.2	48	11	− 8	19	35	1.51	− 0.10	0.55	6.0	11	3	13	14	nw.	Walter S. Woods.
Hayward	Sawyer	1,197	20	23.8[i]	− 5.4	42[i]	10	−15[i]	.....	.....	1.60	+ 0.06	.....	11.0	.....	5[i]	7[i]	8[i]	.....	William E. Swain.
Hillsboro	Vernon	1,000	20	25.4	− 7.4	66	11	− 5	29	45	2.12	− 0.49	0.70	7.0	7	12	11	7	e.	Emil V. Wernick.
Koepenick	Langlade	1,683	20	23.8	− 7.6	60	11	−10	16†	40	4.30	+ 2.32	1.00	27.0	8	0	17	13	nw.	Edward S. Koepenick.
Lac du Flambeau	Vilas		1	23.4	.....	44	11	− 4	13	32	2.03	.....	1.12	16.0	6	10	0	20	n.	W. J. Lovett.
La Crosse	La Crosse	714	39	27.6	− 6.2	47	10	3	29	32	2.55	+ 1.03	0.77	4.7	11	2	7	21	nw.	U. S. Weather Bureau.
Lake Mills	Jefferson	897	20	30.0	− 4.7	73	11	4	29	32	4.71	+ 2.60	1.87	8.1	14	8	7	15	nw.	S. Newton Dexter Smith.
Lancaster	Grant	1,070	20	28.4	− 5.5	69	11	− 1	29	46	2.54	+ 0.78	1.37	3.0	5	3[f]	8[f]	13[f]	w.	Edward Pollock.
Long Lake	Oneida	1,592	3	22.6	.....	56	11	−15	16	40	1.99	.....	0.74	19.7	15	7	7	16	s.	Louis Frank.
Madison	Dane	974	42	29.1	− 5.1	70	11	4	29	50	3.56	+ 1.76	0.84	6.8	12	4	6	20	nw.	U. S. Weather Bureau.
Mather	Juneau	962	7	24.0	.....	63	11	− 3	29	34	2.40	.....	0.58	11.0	10	7	9	14	w.	Frank Evans.
Mauston	....do.	882	15	29.0	− 5.7	66	11	6	13	32	2.15	+ 0.51	0.75	4.0	8	9	9	12	nw.	Eugene L. Hitchcock.
Meadow Valley	....do.	974	20	26.0	− 6.3	63	11	− 4	29	35	2.58	+ 1.05	0.63	9.5	10	4	14	12	nw.	Charles H. Johnson.
Medford	Taylor	1,420	22	22.9	− 7.3	45	11	− 3	29†	29	2.60	+ 1.03	1.40	19.0	8	11	11	8	s.	Wm. Zeit.
Merrill	Lincoln	1,267	5	25.8	.....	61	11	− 8	16	34	2.63	.....	1.20	19.8	6	10	7	13	sw.	J. M. Wilson.
Minocqua	Oneida	1,604	7	22.8	.....	45	11	−13	16	35	1.96	.....	0.81	16.5	13	3	5	22	w.	Benjamin W. Applebee.
Mondovi	Buffalo	738	3	24.6	.....	47	10	−12	19	35	1.13	.....	0.40	10.0	11	11	7	12	nw.	Dr. Chas. Hebard.
Mount Horeb	Dane	1,226	7	28.8	.....	71	11	0	29	31	3.35	.....	0.73	4.5	11	3	5	22	nw.	W. M. Lewis.
Muscoda	Grant	666	2	28.0	.....	70	11	1	29†	39	2.41	.....	0.82	1.0	9	10	6	14	w.	Wm. Hessler.
Neillsville	Clark	996	21	24.2	− 7.1	44	9	− 5	12	34	1.42	− 0.32	0.80	10.0	3	9	0	21	nw.	Wm. Heaslett.
New Richmond	St. Croix	990	6	21.1	.....	42	10	− 9	24	36	2.09	.....	0.60	16.5	10	0	15	15	nw.	Franc A. R. Van Meter.
Osceola	Polk	806	20	22.4	− 7.3	44	7†	−13	19	34	1.46	+ 0.07	0.93	14.0	7	4	5	21	s.	Charles W. Staples.
Park Falls	Price	1,492	20	22.6	.....	41	10	− 9	16	41	1.45	.....	0.63	12.2	10	3[a]	6[a]	20[a]	w.	Flambeau Paper Co.
Portage	Columbia	809	22	29.6	− 6.2	68	11	4	29	31	2.71	+ 1.17	0.51	5.4	9	5	4	21	nw.	James H. Martin.
Port Edwards	Wood	969	1	25.9	.....	65	11	0	24	35	2.51	.....	0.62	9.3	9	22	0	8	w.	Nekoosa-Edwards Paper Co.
Prairie du Chien	Crawford	690	20	29.0	− 7.4	58	10	4	13†	39	2.27	+ 0.70	0.60	3.0	8	10	2	18	s.	James A. Gillis.
Prairie du Sac	Sauk	750	3	29.8	.....	68	11	− 1	29	30	2.82	.....	0.53	5.5	10	7	8	15	sw.	Wisconsin River Power Co.
Prentice	Price	1,551	13	20.9	−10.8	42	11	−12	16†	38	2.27	+ 0.52	0.41	13.7	9	5	2	23	sw.	Joseph G. Lash.
Rhinelander	Oneida	1,550	5	24.4	.....	58	11	− 5	15	36	1.72	.....	0.79	19.0	10	6	4	20	sw.	Rhinelander Power Co.
Shullsburg	Lafayette	1,019	5	29.2	.....	71	11	0	29	41	3.26	.....	0.94	3.0	7	5	10	15	w.	Harrison B. Chamberlain.
Solon Springs	Douglas	1,083	5	20.6	.....	42	10	− 17	16	38	1.60	.....	0.60	10.0	7	9	16	5	sw.	John M. Sayles.
Spooner	Washburn	1,104	17	21.0	− 9.3	43	10	− 7	16†	33	1.68	+ 0.15	0.81	13.5	9	13	6	11	w.	Horace A. Bresee.
Stanley	Chippewa	1,082	7	23.4	.....	44	10	− 7	16	30	1.98	.....	0.90	11.8	7	7	3	20	nw.	W. Humphrey Scott.
Stevens Point	Portage	1,113	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Garry E. Culver.
Sugar Camp Dam	Oneida	1,582	1	.....	.....	.....	.....	.....	.....	.....	1.82	.....	0.78	18.0	10	7[a]	2[a]	7[a]	w.	Robert Hayes.
Twin Lakes Dam	Vilas	1,625	1								2.45	.....	0.72	21.8	9	13	11	6	nw.	Albert D. Hansen.
Valley Junction	Monroe	930	19	26.8	− 6.2	63	11	− 1	29	33	2.26	+ 0.62	0.59	6.9	10	7	5	18	w.	Frederick Muermann.
Viroqua	Vernon	1,412	21	27.0	− 6.0	62	11	0	29	35	3.10	+ 1.43	0.72	7.5	12	5	8	17	sw.	Henry E. Rogers.
Vudesare	Vilas	1,600	3	21.1	.....	52	11	− 9	16	35	4.03	.....	0.62	37.6	13	6	10	14	w.	Louis L. Thomas.
Watertown	Jefferson	824	20	29.6	− 4.4	75	11	2	29	28	4.27	+ 2.47	1.12	7.0	13	7	9	14	nw.	Charles J. Salick.
Waukesha	Waukesha	864	20	30.9	− 5.3	71	11	3	29	42	4.17	+ 2.41	2.20	4.8	8	6	14	10	sw.	Carroll College.
Wausau	Marathon	1,212	16	26.4	− 5.9	61	11	− 1	16†	39	2.57	+ 0.87	1.00	14.0	8	11	7	12	w.	George H. Halder.
Weyerhaeuser	Rusk	1,297	9	21.0	.....	47	9	− 12	19	37	2.22	.....	1.00	20.6	13	3	11	16	sw.	Miss Etta Stiles.
Whitehall	Trempealeau	675	20	26.2	− 7.7	48	10	− 10	19	35	1.51	+ 0.12	0.60	12.1	6	7	0	23	w.	Hans J. Haugh.
Iowa.																				
Albia	Monroe	959	13	32.1	− 6.6	72	11	1	30	44	1.62	− 0.15	0.50	2.5	6	9	8	13	sw.	J. I. Chenoweth.
Algona	Kossuth	1,213	37	26.6	− 6.2	50	6	0	12	37	0.31	− 0.97	0.12	1.5	4	11	8	11	nw.	Dr. F. T. Seeley.
Alta	Buena Vista	1,513	20	25.4	− 7.1	57	26	− 4	12	40	0.44	− 0.79	0.18	1.5	9	12	8	10	nw.	David E. Hadden.
Amana	Iowa	721	35	30.4	− 3.4	70	11	0	29	51	1.95	+ 0.22	0.78	1.5	9	10	9	11	nw.	C. Schadt.
Ames	Story	926	35	31.2	− 2.9	54	10	2	12	35	1.25	+ 0.06	0.60	.....	4	10	13	7	nw.	Iowa State College.
Baxter	Jasper	998	11	30.3	− 7.0	53	26	2	12†	33	1.50	+ 0.17	0.48	1.5	8	13	7	10	sw.	W. R. Vandike.
Belle Plaine	Benton	828	21	29.7	− 5.2	69	11	− 3	29	50	2.08	+ 0.36	0.67	2.0	7	11	5	14	nw.	S. P. Van Dike.

TABLE 1.—*Climatological data for November, 1911. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Iowa*—Continued.**																				
Belmond	Wright		1	27.2	.....	50	25†	1	12†	39	0.95	.....	0.39	1.6	9	2	17	11	nw.	Geo. P. Hardwick.
Bloomfield	Davis		4	33.4	.....	72	11	2	29	48	2.45	.....	0.67	0.8	10	9	2	19	nw.	Albert Power.
Bonaparte	Van Buren		20	32.8	− 5.7	75	11	2	29	56	2.61	+ 0.81	0.65	2.0	8	.....	.....	.....	.....	B. R. Vale.
Boone	Boone	1,134	6	26.2	.....	53	26	1	12†	45	1.01	.....	0.52	T.	4	13	5	12	nw.	Carl Fritz Henning.
Britt	Hancock	1,236	14	25.6	− 8.0	50	25	0	12	38	0.62	− 0.49	0.33	0.9	6	10	9	11	nw.	L. M. Goodman.
Buckingham	Tama		11	.....	.....	.....	.....	.....	.....	.....	1.45	0.00	0.46	T.	5	10	12	8	.....	J. S. Guynn.
Burlington	Des Moines	544	15	32.2	− 7.5	77	11	4	29†	36	3.74	+ 1.96	1.10	5.0	8	13	7	10	w.	Max E. Poppe, jr.
Carroll	Carroll	1,205	21	28.2	− 6.0	57	26	− 3	12	36	0.18	− 0.95	0.18	.....	1	9	5	16	nw.	Mrs. Jos. J. Wolfe.
Cedar Rapids	Linn	733	29	29.4	− 6.5	72	11	3	29†	39	2.12	+ 0.72	0.81	2.3	8	15	4	11	w.	Chas. B. Graf.
Charles City	Floyd	1,015	20	26.6	− 6.4	48	10	3	12	34	1.35	− 0.04	0.72	1.6	9	3	8	19	nw.	U. S. Weather Bureau.
Clear Lake	Cerro Gordo	1,241	13	26.3	− 7.8	48	26	1	17	29	.....	.....	0.30	.....	2	.....	.....	.....	nw.	Oscar Stevens.
Clinton	Clinton	593	44	31.6	− 4.1	76	11	3	29	54	4.53	+ 2.69	1.57	4.5	8	8	8	14	w.	Luke Roberts.
Columbus Junction	Louisa	595	10	32.7	− 6.3	74	11	2	29	51	4.43	+ 2.92	1.75	3.5	8	16	7	7	nw.	J. B. Johnson.
Davenport	Scott	580	40	32.2	− 5.3	76	11	5	29	62	3.84	+ 2.08	1.70	2.5	11	10	6	14	w.	U. S. Weather Bureau.
Decorah	Winnishiek	875	18	27.0	− 6.5	50	11	4	12†	32	1.75	+ 0.20	0.55	1.0	5	.....	.....	.....	.....	F. H. Baker.
Delaware	Delaware	1,083	20	28.4	− 4.4	68	11	0	29	48	3.23	+ 1.66	1.82	1.1	8	8	10	12	nw.	William Ball.
Des Moines	Polk	861	33	32.3	− 4.5	55	26	4	12	38	1.22	− 0.26	0.49	1.9	8	7	7	16	nw.	U. S. Weather Bureau.
Dubuque	Dubuque	639	38	30.7	− 5.3	70	11	5	29	54	3.04	+ 1.23	1.12	2.9	11	5	8	17	nw.	Do.
Earlham	Madison		9	33.0	.....	58	26	1	12	34	0.86	.....	0.44	1.8	6	13	2	15	nw.	George Phillips.
Elkader	Clayton	727	32	27.2	− 6.0	47	11	− 2	29	42	2.31	+ 0.66	0.75	2.0	5	9	5	16	nw.	Chas. Reinecke.
Elma	Howard		2	26.1	.....	45	9†	1	12	31	1.85	.....	0.80	0.2	3	6	12	12	nw.	H. A. Moore.
Estherville	Emmet	1,298	16	24.4	− 6.9	49	26	− 1	12	35	0.90	− 0.34	0.30	5.0	9	10	14	6	nw.	A. O. Peterson.
Fairfield	Jefferson		27	32.4	− 4.5	75	11	4	29	56	3.82	+ 1.54	1.24	2.1	9	15	5	10	nw.	R. Monroe McKenzie.
Fayette	Fayette	1,003	21	27.4	− 5.4	62	11	2	29	49	1.77	+ 0.15	0.71	1.5	6	11	7	12	nw.	R. Z. Latimer.
Forest City	Winnebago	1,226	17	24.0	− 8.4	48	30	0	12	42	0.48	− 0.75	0.25	T.	5	7	7	16	nw.	J. A. Peters.
Fort Dodge	Webster	1,126	11	27.8	− 7.4	56	26	0	12	45	0.44	− 0.78	0.15	0.2	5	.....	.....	.....	nw.	J. F. Monk.
Fort Madison	Lee	516	62	.....	.....	.....	.....	.....	.....	.....	3.08	+ 0.94	1.40	4.0	6	8	8	14	w.	Miss L. A. McCready.
Gilman	Marshall	1,052	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. L. Wylie.
Grand Meadow	Clayton	1,180	20	27.4	− 5.6	62	11	0	29	44	2.35	+ 0.79	0.66	3.0	10	6	7	17	nw.	F. L. Williams.
Grinnell	Poweshiek	1,023	19	31.6	− 4.6	64	11	0	29	48	1.91	+ 0.28	0.62	1.5	7	14	6	10	w.	D. W. Brainard.
Grundy Center	Grundy	976	20	30.3	− 3.7	52	9†	3	12†	37	1.36	+ 0.14	0.55	1.0	4	17	0	13	nw.	J. B. Calderwood.
Guthrie Center	Guthrie	1,077	16	31.6	− 5.7	58	26	− 8	12	33	0.66	+ 0.49	0.38	0.5	5	18	1	11	nw.	D. G. Beardsley.
Hampton	Franklin	1,155	21	28.0	− 5.4	58	4	− 4	12	35	1.15	− 0.41	0.46	0.8	7	7	14	9	nw.	E. C. Grenelle.
Humboldt	Humboldt	1,095	23	29.6	− 4.4	58	27	0	12	38	0.60	− 0.77	0.25	T.	4	15	2	13	nw.	Henry S. Wells.
Independence	Buchanan	921	47	29.0	− 3.6	64	11	0	29	46	1.97	+ 0.65	0.63	1.5	7	10	6	14	nw.	R. E. Dudley.
Indianola	Warren	909	20	32.8	− 5.5	56	26	4	12†	35	1.26	− 0.16	0.42	0.8	9	.....	.....	.....	nw.	Prof. J. L. Tilton.
Iowa City	Johnson	683	51	29.3	− 6.4	75	11	− 1	29	41	3.01	+ 0.75	1.18	1.0	7	11	6	13	nw.	Prof. A. G. Smith.
Iowa Falls	Hardin	1,170	18	25.9	− 7.2	51	26	2	12†	42	1.01	− 0.24	0.44	1.3	7	12	5	13	nw.	J. B. Parmelee.
Jefferson	Greene		12	31.2	.....	58	26	− 1	12	35	0.52	− 0.79	0.28	0.5	7	9	10	11	nw.	Ora M. Hall.
Keokuk	Lee	547	40	34.8	− 4.6	79	11	4	29	65	2.88	+ 1.03	1.12	2.0	10	10	11	9	nw.	U. S. Weather Bureau.
Keosauqua	Van Buren	644	19	31.6	− 7.3	78	11	3	29	59	2.43	+ 0.93	0.53	2.0	10	.....	.....	.....	.....	J. H. Landes.
Knoxville	Marion	920	16	33.2	− 4.3	64	11	3	29	48	1.84	+ 0.55	0.40	4.2	9	11	3	16	nw.	Casey & Bellville.
Lacona	Warren		12	.....	.....	.....	.....	.....	.....	.....	1.55	+ 0.08	0.40	4.7	13	6	20	4	.....	J. B. Alter.
Le Claire	Scott	576	11	.....	.....	.....	.....	.....	.....	.....	4.99	+ 3.52	1.19	3.5	12	.....	.....	.....	.....	Miss M. T. Disney.
Marshalltown	Marshall	947	19	28.4	− 7.6	54	26	− 1	12	43	1.74	+ 0.45	0.53	.....	11	9	6	15	nw.	Ralph B. Reasoner.
Mason City	Cerro Gordo	1,132	14	26.6	− 6.2	48	10	2	12	34	0.82	− 0.82	0.40	0.5	4	6	9	15	nw.	J. S. Mills.
Monroe	Jasper			32.2	.....	54	9	− 4	12	41	1.68	.....	0.56	T.	4	14	2	14	nw.	J. A. Dibel.
Mount Pleasant	Henry	729	30	33.0	− 4.4	75	11	8	12†	54	3.55	+ 1.99	1.22	1.3	9	14	4	12	sw.	J. W. Edwards.
Muscatine	Muscatine		51	.....	.....	.....	.....	.....	.....	.....	4.22	+ 1.92	1.03	2.2	9	.....	.....	.....	.....	William Molis.
New Hampton	Chickasaw	1,169	14	26.6	− 8.1	47	10	1	12	30	0.90	− 0.50	0.65	T.	2	10	6	14	s.	A. F. Kemman.
Northwood	Worth	1,222	15	25.6	− 7.6	47	10	0	12	33	1.98	+ 0.50	0.50	5.0	10	13	7	10	nw.	Chas. H. Dwelle.
Olin	Jones	760	13	30.6	− 6.2	73	11	0	29	45	2.99	+ 1.75	1.30	T.	5	12	9	9	nw.	Dr. F. W. Port.
Osage	Mitchell	1,184	24	27.0	− 3.9	46	10†	1	12	33	1.19	− 0.24	0.53	0.5	4	15	5	10	s.	Lester Coonradt.
Oskaloosa	Mahaska	843	35	32.2	− 4.8	69	11	− 1	29	54	1.40	− 0.09	0.48	1.8	8	8	7	15	nw.	Joseph Boyd.
Ottumwa	Wapello	649	16	33.2	− 6.3	73	11	4	29	56	0.91	− 0.69	0.36	.....	10	7	8	15	nw.	Chester Potter.
Pella	Marion	877	9	32.7	.....	66	11	3	29	47	1.70	.....	0.56	1.6	8	17	1	12	nw.	J. H. Ver Steeg.
Perry	Dallas	975	10	31.6	− 6.2	56	9†	1	12	43	0.96	− 0.49	0.43	0.2	4	14	8	8	nw.	Ed. S. Gray.
Plover	Pocahontas	1,426	15	27.4	− 6.9	54	26	− 2	12	37	0.35	− 1.37	0.20	1.0	3	16	5	9	nw.	J. S. Smith.
Pocahontas	do.	1,248	7	28.4	.....	55	26	− 1	12	38	0.48	.....	0.20	0.5	5	15	8	7	nw.	F. E. Hronek.
Ridgeway	Winneshiek	1,215	13	27.9	− 9.3	50	25	2	29	34	2.04	+ 0.22	0.75	1.0	12	10	6	14	s.	Arthur Betts.
Rockwell City	Calhoun		15	30.2	− 4.8	55	9	− 5	11	35	0.90	− 0.20	0.75	.....	2	20	3	7	.....	C. M. Randall.
Sac City	Sac	1,278	35	29.2	− 4.3	56	26	− 1	12	37	0.73	− 0.38	0.40	3.0	6	9	5	16	nw.	E. N. Baily.
St. Charles	Madison	1,070	10	34.2	− 6.9	60	26	3	12	41	1.36	− 0.07	0.50	1.4	9	15	7	8	nw.	R. D. Minard.
Sigourney	Keokuk	877	15	31.6	− 7.3	70	11	0	29	49	2.21	+ 0.66	0.90	4.0	8	2	18	10	nw.	J. T. Parker.
Stockport	Van Buren	745	9	32.6	.....	74	11	3	29	55	2.61	.....	0.66	4.0	9	.....	.....	.....	nw.	C. L. Beswick.
Storm Lake	Buena Vista	1,440	22	28.7	− 7.4	55	5	− 3	12	38	0.36	− 0.66	0.18	0.2	5	.....	.....	.....	nw.	Prof. Warren Ingold.
Tipton	Cedar	807	12	30.4	− 6.4	71	10	4	29	50	3.79	+ 1.97	1.28	3.3	8	.....	.....	.....	nw.	F. K. Gregg.
Toledo	Tama	856	17	30.3	− 6.1	62	11	2	28	49	1.73	+ 0.22	0.60	1.5	6	.....	.....	.....	nw.	I. F. Giger.
Wapello	Louisa	588	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. W. Schofield.
Washington	Washington	769	29	32.4	− 3.8	74	11	1	29	50	2.79	+ 1.38	1.12	.....	11	10	11	9	nw.	Wm. A. Cook.
Waterloo	Black Hawk	862	28	28.0	− 7.7	50	26	3	29†	42	1.19	− 0.26	0.43	1.2	7	13	3	14	nw.	Ralph B. Slippy.
Waukee	Dallas	1,039	8	31.9	.....	55	26	3	12	33	1.50	.....	0.61	0.7	11	16	4	10	nw.	Samuel F. Foft.
Waverly	Bremer	948	15	28.1	− 7.0	49	10†	3	12	45	1.42	+ 0.02	0.55	.....	5	10	12	8	nw.	Earl C. Moore.
Webster City	Hamilton		6	30.0	.....	53	26	2	12	34	0.93	.....	0.43	0.5	5	10	9	11	sw.	C. D. Carpenter.
West Bend	Palo Alto	1,197	18	27.9	− 4.6	52	26	0	12	35	0.61	− 0.73	0.24	1.3	6	10	10	10	nw.	Phil. Dorweiler.
Whitten	Hardin	1,036	14	28.6	− 6.7	51	10†	0	12†	37	1.25	+ 0.12	0.80	1.0	3	7	9	14	nw.	Dr. F. P. Butler.
Winterset	Madison	1,129	20	32.8	− 4.0	58	26	2	12	33	1.18	− 0.11	0.50	0.3	5	10	6	14	nw.	Dr. Robt. S. Cooper.
Missouri.																				
Gorin	Scotland	700	25	.....	.....	.....	.....	.....	.....	.....	2.34	+ 0.34	0.90	0.7	6	8	6	16	nw.	J. W. Pulliam.
Hannibal	Marion	534	19	36.6	− 3.9	82	11	6	29	66	2.30	+ 0.35	0.87	2.3	12	10	12	8	sw.	U. S. Weather Bureau.
Louisiana	Pike	500	34	37.1	− 6.6	81	11	6	29	50	1.95	− 0.29	0.72	0.7	7	16	11	3	sw.	J. T. Farrell.
Mexico	Audrain	797	34	36.8	− 6.0	81	11	5	29†	36	2.48	+ 0.04	0.62	4.1	9	14	1	15	s.	J. F. Llewellyn.
Steffenville	Lewis	576	19	37.0	− 6.3	81	11	2	29	51	2.32	+ 0.53	0.67	2.2	9	8	9	13	se.	Frank Hall.
Sublett	Adair	1,000	32	34.8	− 5.9	75	11	2	29	53	2.75	+ 0.91	1.00	0.5	7	8	7	15	nw.	Lewis Spriggs.
Vandalia	Audrain	776	1	38.0	.....	81	11	10	12	46	1.74	.....	0.86	0.4	3	7	5	18	nw.	C. B. Ellis.
Warrenton	Warren	865	22	37.0	− 5.7	78	11	7	30	36	2.48	+ 0.21	0.72	1.5	8	7	8	15	nw.	Prof. J. H. Frick.
Indiana.																				
Collegeville	Jasper		12	36.6	− 4.4	78	11	9	13	48	3.73	+ 1.23	1.57	3.0	7	4	13	13	w.	Otto Miller.
Knox	Starke	716	6	35.3	.....	74	11	8	16	59	3.79	.....	1.30	8.5	11	9	11	10	s.	W. R. R. Tatman.
Laporte	Laporte	810	15	30.6[1]	.....	72[1]	11	10[1]	12	27[1]	3.94	+ 1.16	.....	9.0	....	9[1]	1[1]	10[1]	.....	Wm. M. Walton, jr.
Plymouth	Marshall	790	8	34.2	.....	72	11	9	13	55	4.10	.....	1.02	15.5	13	8	13	9	sw.	J. W. Siders.

TABLE 1.—*Climatological data for November, 1911. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Illinois.																				
Aledo	Mercer	738	11	32.2	− 5.4	76	11	2	29	45	4.06	+ 1.99	1.19	1.3	10	9	6	15	nw.	William B. Frew.
Alexander	Morgan	670	18	37.4	− 4.8	78	11	2	29	61	2.47	+ 0.39	1.17	2.4	9	10	8	12	nw.	George H. Hall.
Antioch	Lake	861	10	31.7	− 5.5	73	11	8	29	42	5.29	+ 3.11	1.70	4.0	8	4	7	19	s.	J. C. James.
Astoria	Fulton	650	12	34.4	− 5.9	79	11	4	29	57	2.33	+ 0.43	0.58	4.6	10	10	10	10	nw.	Edward V. Bohl.
Aurora	Kane	687	32	33.5	− 3.8	76	11	8	16	39	2.78	+ 0.33	1.08	1.2	8	6	11	13	sw.	W. Holden.
Beardstown	Cass	448																		Mrs. L. M. Rice.
Bement	Piatt	700	4	37.6	.....	74	11	9	13	61	2.53	.....	1.18	2.7	7	15	6	9	s.	Rev. C. S. Adams.
Bloomington	McLean	840	20	34.8	− 5.7	75	11	7	29	35	3.71	+ 1.11	1.67	2.5	8	13	2	15	sw.	Prof. H. N. Pearce.
Cairo	Alexander	359	33	42.6	− 4.3	78	11	18	13	42	3.30	− 0.72	1.56	0.1	11	9	6	15	s.	U. S. Weather Bureau.
Carbondale	Jackson	412	6	42.6	.....	75	11	11	12	62	3.34	.....	1.35	0.9	7	14	6	10	sw.	State Normal University.
Carlinville	Macoupin	663	21	38.6	− 4.0	78	11	11	30	61	2.18	− 0.38	0.64	1.2	8	11	15	4	nw.	W. T. Eddy.
Carlyle	Clinton	470	26								3.51	+ 0.17	1.10	1.0	8					J. E. Rogan.
Chester	Randolph	380	5								3.37	.....	1.08	.....	13					F. A. Gollon.
Clinton	Dewitt	727	1	36.2	.....	75	11	10	13	60	.....	.....	.....	0.5	7	16	10	4	nw.	J. Frank Ziegler.
Coatsburg	Adams	763	19	35.5	− 5.5	78	11	3	29	50	2.60	+ 0.54	0.91	2.0	6	6	6	18	s.	Dr. J. R. Lambert.
Cobden	Union	656	28	43.2	− 3.7	79	12	12	13	64	4.34	+ 0.12	1.35	T.	7	7	5	18	s.	John Buck.
Dakota	Stephenson	929	6	30.5	.....	72	11	− 1	29	32	4.04	.....	1.40	4.9	10	6	10	14	sw.	Rev. G. W. Kerstetter.
Decatur	Macon	685	20	36.6	− 4.6	75	11	10	13	34	3.31	+ 0.77	0.90	2.5	10	14	8	8	nw.	Prof. J. H. Coonradt.
Dixon	Lee	725	21	30.8	− 5.7	75	11	4	29	40	5.47	+ 3.71	1.80	2.0	9	7	14	9	.....	H. U. Bardwell.
Duquoin	Perry	459	23	41.6	− 3.7	77	11	15	12†	42	2.68	− 0.19	1.30	2.5	6	13	10	7	nw.	G. H. Knetzger.
Dwight	Livingston	600	18	35.2	− 4.1	76	11	10	13	59	2.57	+ 0.03	0.98	1.4	9	8	3	19	w.	Edward O. Welch.
East St. Louis	St. Clair	418									3.27	.....	0.95	0.3	7					W. McK. Brown.
Edwardsville	Madison	554	12								2.17	− 1.06	0.65	2.5	7					W. H. Morgan.
Elgin	Kane	716	4	33.6	.....	74	11	10	13†	59	2.46	.....	1.22	T.	7	3	13	14	sw.	Elgin Observatory.
Ewing	Franklin										3.06	.....	1.31	0.4	6	10	10	10	s.	Ewing College.
Fairview	Fulton																			Abram Wilson.
Galva	Henry	842	19	32.0	− 5.6	72	11	0	29	41	2.76	+ 0.94	1.03	5.5	9	10	7	13	nw.	Prof. F. U. White.
Grafton	Jersey	422	18								3.10	+ 0.72	0.73	1.5	8					R. C. Goodrich.
Greenville	Bond	635	33	37.8	− 4.7	75	11	14	12†	38	3.52	+ 0.15	0.90	2.5	12	9	6	15	se.	M. S. Oudyn.
Griggsville	Pike	650	26	38.0	− 3.9	78	11	6	29	43	2.15	− 0.05	0.78	.....	5	10	7	13	s.	George F. Kneeland.
Havana	Mason	475	19	37.3	− 4.6	79	11	9	29	45	2.01	− 0.11	0.56	0.8	7	11	16	3	s.	F. & C. Borgelt.
Henry	Marshall	500	23	35.2	− 3.4	77	11	6	29	42	2.61	+ 0.24	1.04	3.0	6	13	8	9	nw.	Dr. F. A. Powell.
Hillsboro	Montgomery	675	17	37.1	− 6.7	74	11	12	13	60	2.71	+ 0.09	0.95	2.0	6	14	1	15	s.	Ira L. Woodward.
Joliet	Will	541	20	32.6	− 6.1	74	11	4	16	48	2.87	+ 0.57	1.29	3.6	12	11	4	15	nw.	F. M. Muhlig.
Kishwaukee	Winnebago	730	23	32.2	− 4.7	75	11	2	29	39	4.57	+ 2.31	0.97	3.4	10	6	6	18	sw.	George Stevens.
La Grange	Cook	657	19	34.6	− 3.5	76	11	9	29	56	2.90	+ 0.54	1.32	1.5	8	10	6	14	sw.	Prof. F. E. Sanford.
La Harpe	Hancock	698	32	34.2	− 5.3	78	11	4	29	46	1.88	− 0.08	0.71	5.7	9	11	10	9	nw.	George E. Campbell.
Lanark	Carroll	883	22	31.0	− 4.8	75	11	− 2	29	40	3.98	+ 1.95	1.20	4.0	9	12	6	12	s.	M. N. Wertz.
La Salle	Lasalle	536	33	33.2	− 4.6	76	11	9	29	62	2.26	− 0.38	0.86	1.1	12	10	7	13	w.	U. S. Weather Bureau.
Lincoln	Logan	482	23	36.2	− 4.8	76	11	8	29	59	1.59	− 0.69	0.53	1.9	7	9	13	8	s.	Prof. C. S. Oglevee.
Loami	Sangamon	624	11								3.25	+ 1.10	1.30	1.5	8	11	1	18	se.	H. C. Foster.
Macomb	McDonough													3.6	9					State Normal University.
Manteno	Kankakee	711									3.10	.....	1.11	6.6	10	21	4	5	sw.	J. F. Schmeltzer.
Martinton	Iroquois	633	24	33.2	− 6.3	74	11	9	13	32	2.00	− 0.45	0.58	2.7	9	8	9	13	w.	Joseph H. Peltier.
Mascoutah	St. Clair	425	21	41.0	− 3.4	78	11	14	12†	62	2.68	− 0.59	0.77	2.0	7	16	9	5	nw.	George Henrich.
Minonk	Woodford	745	18	35.7	− 3.8	76	11	7	29	61	2.11	+ 0.16	0.70	1.5	9	10	2	18	nw.	M. H. Pfaffle.
Monmouth	Warren	784	19	32.9	− 5.8	78	11	2	29	54	3.00	+ 1.16	1.16	3.0	8	13	3	14	w.	Dr. J. C. Hutchison.
Morris	Grundy																			E. G. Cryder.
Morrison	Whiteside	685	17	32.5	− 5.3	75	11	0	29†	39	5.12	+ 3.18	1.09	5.5	12	8	11	11	nw.	S. A. Maxwell.
Morrisonville	Christian	638	12	37.4	− 5.3	76	11	10	13	61	2.74	+ 0.63	1.37	2.2	7	11	12	7	nw.	J. D. Lowis.
Mount Vernon	Jefferson	511	17	39.1	− 5.9	80	11	12	13	35	2.63	− 0.29	1.02	1.0	5	13	2	15	nw.	Theodore P. Stelle.
Nashville	Washington																			Prof. John M. Avery.
Oregon	Ogle	702	2	32.0	.....	74	11	2	29	36	5.21	.....	1.50	4.0	9	5	4	21	w.	Samuel Ray.
Ottawa	Lasalle	500	25	34.8	− 4.2	77	11	11	29	34	2.28	− 0.09	0.62	5.0	10	6	2	22	sw.	Miss Maude M. Harris.
Pana	Christian	692	25	37.8	− 4.0	75	11	10	12	61	2.59	− 1.03	1.18	1.2	7	19	5	6	nw.	C. W. Sibley.
Peoria	Peoria	609	33	33.3	− 4.2	77	11	6	29	60	3.01	+ 0.37	1.40	2.7	11	8	8	14	s.	U. S. Weather Bureau.
Pontiac	Livingston	546	9	35.6	.....	76	11	12	12†	60	2.95	.....	1.35	1.0	7	8	7	15	w.	George Butterworth.
Quincy	Adams	481	....	36.4	.....	78	12	8	29†	33	1.92	.....	0.65	0.4	9	17	3	10	nw.	Fred J. Brinkoetter.
Riley	McHenry	956	52	32.2	− 2.2	73	11	4	29	45	4.70	+ 2.69	0.96	3.7	12	8	6	16	nw.	John West James.
Roberts	Ford	774														11	10	9	s.	R. E. Bradbury.
Rockford	Winnebago	763	19	32.2	− 4.4	74	11	3	29	38	4.30	+ 1.83	1.36	4.5	8	15	0	15	.....	Hosmer C. Porter.
Rushville	Schuyler	670	20	35.8	− 4.5	79	11	4	29	44	2.12	+ 0.03	0.82	4.0	8	7	8	15	s.	H. F. Dyson
St. Charles	Kane	700	16	34.0	− 3.7	76	11	10	13†	58	3.82	+ 1.35	1.80	3.0	8	5	17	8	nw.	Dr. William H. Bishop.
St. Peter	Fayette	500	10	39.0	− 4.5	77	11	14	12†	59	3.00	+ 0.72	0.95	1.7	7	10	9	11	nw.	M. L. Lansford.
Sparta	Randolph	538	25	40.6	− 4.2	75	11	13	12†	60	2.71	− 0.76	0.82	1.0	7	14	5	11	nw.	James A. Caldwell.
Springfield	Sangamon	644	33	36.0	− 4.7	76	11	10	29	57	3.10	+ 0.44	1.30	2.6	13	9	10	11	s.	U. S. Weather Bureau.
Streator	Lasalle	626	18			79	11				2.86	+ 0.56	1.15	.....	10	21	3	6	sw.	Miss Lora Sweetser.
Sullivan	Moultrie	530	11	36.6	− 5.8	76	11	10	13	33	3.02	+ 0.44	1.10	4.0	5	9	14	7	nw.	C. A. Corbin.
Sycamore	Dekalb	855	31	30.9	− 5.0	72	11	3	29	34	3.74	+ 1.32	1.20	2.7	11	14	6	10	w.	Miss Edna J. Davis.
Tiskilwa	Bureau	798	27								2.05	− 0.15	0.90	4.2	5					F. I. Smucker.
Walnut	....do	717	20	33.0	− 5.6	75	11	3	29	35	3.15	+ 1.25	1.01	4.6	11	9	12	9	s.	O. C. Nussle.
Warsaw	Hancock	501	13								2.35	− 0.15	0.83	2.0	6					W. R. Kirkbride.
Waterloo	Monroe										2.79	.....	0.86	0.4	7					Prof. James E. Raibourne.
White Hall	Greene	573	3	36.8	.....	79	11	7	29	37	2.94	.....	1.01	3.1	7	12	6	12	w.	Dr. R. A. Pritchett.
Windsor	Shelby	681	12	37.8	− 3.8	77	11	11	13	59	2.80	− 0.19	0.90	1.7	7	7	13	10	nw.	Herbert Rose.
Winnebago	Winnebago	900	24	31.8	− 4.2	75	11	2	29	37	4.65	+ 2.49	1.33	4.0	9	9	11	10	sw.	Frank Osborn.
Yorkville	Kendall	584	24	33.2	− 3.0	75	11	5	16	50	2.08	− 0.30	1.00	2.1	9	10	9	11	w.	Herman A. Grimwood.
Zion	Carroll	938	17	30.4	− 5.8	75	11	0	29	51	3.41	+ 1.55	1.02	8.0	8	12	5	13	w.	Robert F. Gillogly.

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1911. District No. 5, Upper Mississippi Valley.*

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
North Dakota.																															
Amenia	Red										T.	.35	.40		T.	T.	T.		T.	T.				T.					T.			0.75
Bottineau	Mouse							.03		T.	.08	T.			.06	T.			.02	.06			T.	.02			T.	T.				0.27
Cando	Sheyenne									.04												.24										0.28
Crosby	Mouse				T.		T.		.03	.04				.08	.10			.05		.19							.05		.03			0.57
Devils Lake	Sheyenne						.01	T.		.10	.11	.03		T.	.06	T.			.01	.02			.10				.02	.01				0.47
Donnybrook	Mouse						.16		T.	.15	T.				.30	T.			.02				.02				.02	.05				0.72
Dunseith	do																														
Edmore	Sheyenne						T.				.20																					0.20
Fessenden	James	T.						.04			.05	.20				T.			T.	.08												0.37
Forman	Sheyenne							T.	T.			.62				.30			.10								.20					1.22
Grafton	Red						.11				.02	.11	.07	.09						.10	.02			.05			T.	T.				0.57
Granville	Mouse	.01								.10				T.		.20							T.				.05					0.36
Hannah	Pembina						T.			.40	T.				.30					.10			T.									0.80
Hansboro	Red									.07				13						14			.05					.01				0.40
Hillsboro	do					.04	.03				.15	.50	.10		.05					.20			.05				.10	.05	.05			1.32
Lakota	Sheyenne					T.				T.	.12	.09			.08	T.			.02	.05	.05		.08					.03				0.52
Langdon	Pembina																														
Larimore	Red																														
Lisbon	Sheyenne							T.	.30	T.	T.	.30	.30	.10	T.					.30	T.							T.	T.		T.	1.00
McKinney	Mouse						T.			.20					.10	.15		T.					T.				T.					0.45
Manfred	Sheyenne					.10				.10	.20	.10			.10	T.				.05	.05		.02				.05					0.77
Mayville	Red					.09	.08						.13	T.		T.			T.	.13			T.				.60	T.				1.03
Minot	Mouse	.04						.06		T.	.07	T.	T.	.15	T.			.04		.05				.04			.01	T.	T.			0.46
Minto	Red										*	.27			.05					.27			.05									0.64
Oriska	Sheyenne																														
Park River	Red																														
Pembina	do																														
Power	Sheyenne									T.	*	.60					.05		.05									.05				0.75
Pratt	Mouse					T.	T.				T.	T.		.10																		0.10
Towner	do																														
University	Red					T.	.20			T.	.05	.40			.10					.20			.07				.08	T.				1.10
Wahpeton	do								.01			.45					.01										.01					0.48
Walhalla	Pembina	T.									.20	.10			.30					.30												0.90
Westhope	Mouse																														
Willow City	do						.07			.20	.10				.10				T.	T.	.05			T.								0.52
Minnesota.																															
Albert Lea	Mississippi	T.		T.			.42			T.		.02	.01		T.		.03	T.		T.									T.			0.48
Alexandria ‖	do	T.					.06	.04		.02	T.	.07	.08	T.	.14	T.		.40		T.	.08							.07				0.96
Angus	Red					.07						.40			.30					.25			.05				.08	.02				1.17
Bagley	do					.15					*	*	.70		T.					.02							*	.05				0.92
Baudette	Rainy						.08	T.	.01	.05	.14	.28	.07		.04				.01		.01		.05	.02			.10	.01				0.87
Beardsley	Minnesota																														
Beaulieu	Red	T.					.20	T.		T.		.30	.30							.30	.10		T.	.10			T.					1.30
Bemidji	Mississippi						.11			.12	.08	.41					.04				.03											0.79
Bird Island	Minnesota	T.		.01			.20			.06		.03	T.		.06		.54			.01							.02					1.02
Caledonia ‖	Mississippi	T.					.48			.01	.48	.30	.05			T.		.02	T.	T.	.05	T.			T.				.20	.05		1.64
Campbell ‖	Red						.06			.10	.07	.20	.10	.10	.05			.60		.05				.15				.20	.30			1.98
Cass Lake ‖	Mississippi	T.					.30							.40		T.					.05		.04					T.				0.79
Collegeville	do	.01					.24			.04		.04			.15		.45	.26		.10	.02							T.				1.31
Crookston ‖	Red						.00		.04	T.	.10	.20	.20			.15				.20	.30			.10				.20				1.58
Detroit ‖	do	T.					T.	T.			.23	.40	.10	T.	T.					T.	.26		.23					T.				1.22
Ely	Rainy																														
Fairmont (near)	Minnesota	T.		T.			.28			.09		T.			.50			.05		.03								.05	.02			1.02
Faribault	Mississippi																														
Farmington	do	T.		T.	.01	T.	.18			T.		.08	T.		.13		.13	.13		.12	.18							.12	.04			1.12
Fergus Falls	Red					.02	.07			.12	.03	.50	.10	.06	.05		.07	.31		.10	.02		.03	.01			.03	.04				1.56
Fort Ripley ‖	Mississippi	T.					T.	.12	.10	T.	.10		.12	T.	.09	.04		.35		T.	.15						T.	.10				1.17
Fosston	Red					.01						.10	.30		.13					.20			.14				.13					1.01
Fram	do																														
Glencoe	Mississippi	T.		T.								T.			.10		.60			T.									.07			0.70
Grand Meadow	do	.02		.04	.03	.04	.73	.02	T.	.08	.02	.04	.03	T.	.09		.08	.28	T.	.07	T.			T.								1.64
Gull Lake Dam	do		T.				.05	.05		.20	.08	.20	.02	.01				.22		.20							.02	.10				1.15
Hallock	Red					.05	.25		T.	T.	.20	.10			.10					.20			T.					T.				0.90
Halstad ‖	do						.05			.01										T.	.28			.36								0.70
Hinckley	St. Croix												.10	.20					1.00		.20											1.50
International F	Rainy						.20	T.	T.	.40	1.20					T.				T.	T.		.10	T.			T.	.15				2.05
Itasca State Park	Mississippi						.12			.12		.50			.10					.10												0.94
Lake Crystal	Minnesota			T.			.27					T.						T.		.10								T.				0.37
Leech Lake Dam	Mississippi	T.					.16			.14	T.	.37	.14		.11			T.	T.	.07				.05			.08	.07				1.19
Little Fork	Rainy						.21			.16	.13	.45			.12																	1.07
Long Prairie	Mississippi												.20	T.	T.	T.	.40			T.												0.60
Lynd	Minnesota	T.		T.			T.						.04		.09	.05	.17			.04								.03				0.42
Mankato ‖	do				T.		T.	.16					T.				T.	.11														0.27
Milaca	Mississippi																														
Milan	Minnesota			T.							.10				.15		.80	.20									.10					1.35
Minneapolis	Mississippi	T.		.01	T.	.01	.05		.01	.04		.05			.12		.72	.08		.13	T.			T.			.03		T.			1.25
Montevideo ‖	Minnesota			T.			.06	.02			T.	.18	T.			.12	*	1.08		.10	.10			T.				.60				2.26
Moorhead	Red						.03		.04	.24	.17	.39			.04		T.			.08	T.		.01				.01	.02				1.03
Mora	St. Croix	T.				.01	.09	.01	.01	.06		.05		.10	.15		.40	.60		.10	.05							.15				1.78
Morris	Minnesota						.04				.03	.10			.10		.80	.10		.10			.05						.05			1.37
New London	Mississippi	T.							T.			T.					.80										.05					0.85
New Richland	Minnesota	T.		T.		T.	.28	T.	T.			T.	T.		T.		T.	.04	T.	.06	T.							T.	T.			0.38
New Ulm ‖	do	T.	T.		.03	T.	.15		.02	.07	T.	T.	.05			.13	.03	.15		.10	.05			T.	T.			.05	T.			0.83
Osakis	Mississippi	T.					.08				T.	.08	T.	T.	T.		.26	.21		.10			T.				T.	.04				0.77
Park Rapids ‖	do						.09	.04		.09	.10	.10	.10	T.	.05	.05		.04			.15			T.				.08	T.			0.89
Pine River Dam	do	T.					.08			.06	T.	.20			.08			T.		.04							T.					0.46
Pokegama Falls	do	T.					.12	T.		.15	.04	.17	T.		.05	T.		.08		T.	.03			T.			.07	.06				0.77
Red Lake	Red										T.	.64			.27					.20							.20					1.31
Red Wing ‖	Mississippi	.02			T.		.26	.16		.04	.02		.02		T.	.04		.54	T.	T.	.18	T.			T.			.04	.02	T.		1.34
Redwood Falls	Minnesota	T.		.05			.20					.10			.10		.40	.20		.10								.10	.05			1.30
Reeds Landing ‖	Mississippi	T.			.04		.52	.04		.02		.04	.04			.07		.20	.03		.07								.02	T.		1.09
Rochester ‖	do	T.			T.		.35	.23		T.	T.	T.	T.			.50		.45		T.					T.				.10	T.		1.63
Roseau	do																														
St. Charles	do	T.					.70	.05				T.	.09		.13		.08	.53		.09									.07			1.74
St. Cloud	do	T.				T.	.23			.16		.06	.03	.07	.03		.45	.43		.05							T.	.14				1.65
St. Paul	do	T.		.01		.02	.06		.01	.03		.06	T.		.10		.58	.08		.14				T.			.03		T.			1.12
St. Peter	Minnesota												T.		.10					.10												0.20
Sandstone	St. Croix																														
Sandy Lake Dam	Mississippi						.10			.16	.04	.12			.06			.07	T.									.08				0.63
State Sanatorium	do						.18	.01		.12	.10	1.40			.10			.10	T.	.05			T.	.10			.05	T.				2.21

TABLE 2.—*Daily precipitation for November, 1911. District No. 5*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Minnesota—Contd.																																
Stillwater ‖	St. Croix						.21	T.	T.	.12	T.			T.	.05	T.		.50			.20							T.				1.08
Taylors Falls	do						.20	T.					T.	T.	T.		.50	.60		T.												1.30
Thief River Falls	Red						.04		.01	.04		.20			.20					.21							T.	T.				0.70
Tracy	Minnesota																															
Warroad	Rainy					T.	.37		T.	.18	.10	1.10										T.					.20					1.95
West Concord	Mississippi																															
Winnebago ‖	Minnesota	T.			T.		.28	T.			.10	T.	T.			T.	T.	T.		.10			T.					T.	T.			0.48
Winnibigoshish	Mississippi					T.	.14			.10		.51	.11		.08					.02			T.	.11			.12	.03				1.22
Winona	do																															
Worthington ‖	Des Moines	T.		T.	T.		.09	.05				T.			T.	T.		.05		.05			T.					T.	T.			0.24
Zumbrota	Mississippi	T.			T.		.40			.01		T.	T.		T.	T.	T.	.10	.08	.08	T.	T.		T.					T.	T.			0.67
South Dakota.																																
Milbank ‖	Minnesota						T.	.03			T.	.09	.06		.04			.90	.04	.08								.04				1.28
Wisconsin.																																
Antigo	Wisconsin	T.			T.		.20			.20		.20	.01	T.	.10	.02	T.	1.40	.10		.01			T.	T.			T.	.10			2.34
Barron	Chippewa	.02					.27			T.		T.		.05	.18		.30	.50		.05								.02				1.39
Beloit	Rock						.82			.77	.44				.05			1.35		.25									.45			4.13
Big St. Germain Dam.	Wisconsin	.09					.89			.11	.20	.38	.51	.06	.21	T.		1.20	T.					T.					.47			4.12
Brodhead	Rock	T.					.90			.95		1.00			T.			.60		T.			.17						.40			4.02
Burnett	do	.02			T.		.61	.12		.35	.40	.74	.05		.03		.02	.48	T.	T.	.09		.11					T.	.20			3.22
Cottage Grove	do	T.					.50	.14		.54	.30	.60	.03		.04	T.	T.	.52	.30		.11		.14	.40	T.				.31			3.93
Darlington	do						.70	T.		.80		.80							.40	T.		.35							.20			3.25
Deerskin Dam	Wisconsin	.05					.34				.45	T.	.20					.52	.70	T.				T.				T.	1.40			3.66
Delavan	Rock	T.					.70			.78		1.03			.06		.59	.03		.13			.08						.43			3.83
Dodgeville	do									.90	.40	.10					T.	T.		.10												
Downing	Chippewa	T.			T.		.10	T.		T.		T.	T.		T.		.80	1.20	T.	T.	T.			T.					T.			2.10
Eau Claire	do	.01			.03		.29			.06	T.	.12	.08	T.	.17		.35	.54	T.	.08	.04			T.				T.	.02			1.79
Grand Rapids ‖	Wisconsin		T.				.41	.15			.73	.15		T.		.02		.40	.20		.20								.20	T.		2.46
Grantsburg	St. Croix	.02					.10						.30	.20	.15			1.50			.20							.10				2.57
Hancock	Wisconsin						.75	.02		.37	.38	.02	T.	T.		T.	.20	.30	T.	T.	.10								.40			2.54
Hatfield	Black	.02					.55		.04	.10	.20		.02		.08		.20	.05		.05								.20			1.51
Hayward	St. Croix						.35			T.		*	*		*			*				1.05						.10	.10			1.60
Hillsboro	Wisconsin	T.			T.		.62			.70		.05	T.		T.		.10	.05	T.	.30	T.							.30				2.12
Koepenick	do						1.00			.20		.40	.20		.30			1.20	.40										.60			4.30
Lac du Flambeau	Chippewa			.25						T.		.30	.10		.18			1.12	.08													2.03
La Crosse	Mississippi	T.		T.		.14	.59		T.	.43	.31	T.	T.		.01		.48	.29	T.	.15	.02			T.				.05	.08			2.55
Lake Mills	Rock	T.			T.		.88	.04		.42	.30	1.87	.02		.10			.37	T.	.03	.12		.07	.01				T.	.40	.08		4.71
Lancaster	Mississippi						.77				1.37							.20		.10								.10				2.54
Long Lake	Wisconsin	.04					.37	.02		.04	.20	.09	.08	.03	.17	.06		.74	.02					T.	.02			.01	.10	T.		1.99
Madison	Rock	T.			T.	.13	.48		.04	.74		.84	T.		.02		.12	.38	T.	.11	T.		.08	T.	T.			.40	.22			3.56
Mather ‖	Wisconsin	T.					.44	.10		.02	.58	.22	.02			.02		.40			.20								.40			2.40
Mauston	do	T.					.40	.20		.10	.45	.05					T.	.75		T.	.10								.10			2.15
Meadow Valley	do	T.					.47	.05		.05	.57	.29			T.		.15	.63	T.	.05	.18								.14			2.58
Medford	Black						.30			T.		.40		.10	.10		.10	1.40			.10								.10			2.60
Merrill	Wisconsin						.15					.10	.08		.20			1.20											.50			2.23
Minocqua	do	T.					.10	.03		.06	.08	.45	.04	.03	.15	.05	T.	.81	.03	T.				T.	T.			.07	.06			1.96
Mondovi	Mississippi	.01			T.		.40	.03		T.	.05	.01	T.	.07	T.	.06	.40	T.	.05	.01				T.			T.	.04				1.13
Mount Horeb	Rock						.72			.73	.40	.55	.05		.05			.30		.05			.08					.10	.32			3.35
Muscoda ‖	Wisconsin						.45	.24		.19	.82	.12	.08			T.		.31	T.		.08								.12			2.41
Neillsville	Black	T.			T.		.42											.80		T.								.20				1.42
New Richmond	St. Croix	T.			.05		.38			.06			.10	.10	.20			.60		.40	.10							.10				2.09
Osceola ‖	do			T.	T.	.11	.05		T.	T.		.15		.07	.07		.93	T.		.08				T.			T.		T.			1.46
Park Falls	Chippewa	.02					.26			.06		.13	.09		.16			.63	.04									.02	.04			1.45
Portage	Wisconsin	T.			T.		.44	.09		.45	.27	.51	T.	T.	.01		T.	.51	T.	T.	.12								.31			2.71
Port Edwards	do						.46			.06	.62	.45	.05				.20	.50			.10								.07			2.51
Prairie du Chien ‖	Mississippi						.45	.12		.20	.58		.18			T.		T.	.60		.04								.10			2.27
Prairie du Sac	Wisconsin	T.					.31	.20		.40	.53	.50	.05		.05			.45			.13								.20	T.		2.82
Prentice	Chippewa	.11			.05		.33					.39	.27	T.	.23	T.	.36	.41	.12					T.								2.27
Rhinelander	Wisconsin	.03					.30			.02	.02	.13	.13	T.	.15	.06		.79	T.					T.					.09			1.72
Shullsburg	Mississippi						.66			.94		.63						.53			.02		.13						.35			3.26
Solon Springs	St. Croix						.30			.30		T.	.10		T.	.10	T.	.60		T.	T.						.10	.10				1.60
Spooner	do	.06					T.		T.	T.		.05	.06	.07	.13		.43	.81			.03							.04				1.68
Stanley	Chippewa				T.		.30			.15		.22	T.	T.	.12	T.	.20	.90		T.									.09			1.98
Stevens Point	Wisconsin																															
Sugar Camp Dam	do	.08					.36				.22	.04	.07	.03	.06	.04		.78						T.					.14			1.82
Twin Lakes Dam	do	.04					.33	.09		.26			.15	.15	.25			.72	T.					T.					.46			2.45
Valley Junction	do						.41			.09	.59	.32	.05		T.		.10	.19	T.	.14	.12								.25			2.26
Viroqua	Mississippi	T.					.72	.07		.12	.64	.60	.05	T.	.04		T.	.36	.02	.15	.13			T.					.20			3.10
Vudesare	Wisconsin	.12					.30	T.		.26	.30	.47	.32	T.	.18	.24	T.	.62	.40	.45	T.		T.	.12	T.			T.	.25			4.03
Watertown ‖	Rock		T.				.56	.37		.10	.62	.05	1.12	T.		.03		.42	.12	T.	.25	T.		.18					.35	.10		4.27
Waukesha	Fox	T.					.84				.48	2.20	T.		.08			.15	T.		.20		.02						.20			4.17
Wausau	Wisconsin	T.			T.		.32			.05	.17	1.00	.12	T.	.09	T.	T.	.77			.20								.05			2.57
Weyerhaeuser	Chippewa	.15	T.		T.		.27			.12		.10	.20	.10	.07		.60	.40	T.	.03	.12			T.				.05	.01			2.22
Whitehall	Mississippi	T.		T.	T.		.30			T.			T.		.01		.20	.60		.20								.20				1.51
Iowa.																																
Albia ‖	Des Moines		T.				.49			.50			T.					.25	T.	T.				.13	T.				.10	.15			1.62
Algona	do	.05		T.			T.		T.	.11		T.	T.			T.	T.	.12		.03									T.			0.31
Alta ‖	Raccoon	.07			.01		.18	.02			T.	.01	.05					.04	T.	.04				T.					.02	T.		0.44
Amana	Iowa	T.				.06	.57			.78		.20						.17		.03			.02	T.				.01	.11			1.95
Ames	Skunk	T.				T.	.60		T.	.14		T.						.27		.24				T.					T.			1.25
Baxter	do	T.				.03	.45		.08	.36	.02	.01						.36		.19				T.					T.			1.50
Belle Plaine	Iowa	T.				.31	.40			.67		.07						.43		.10			T.					T.	.10			2.08
Belmond	do	.02						.39	T.	.02		.04	.03			.02		.36		.05									.02			0.95
Bloomfield	Mississippi					.07	.49			.67	.12	.51						.21		.02			.20	.08			T.	.08				2.45
Bonaparte	Des Moines			T.			.52			.55	.05	.65						.20					.47	.09					.08			2.61
Boone ‖	do																															
Britt	Iowa	T.		T.			.33			.02		.01	T.			T.		.17		.07								T.	.02			0.62
Buckingham	Cedar					.46	.04		.25	.40							.30	T.		T.				T.				T.				1.45
Burlington ‖	Mississippi						.80			.47	.25		1.10					.42	T.	T.	T.			.20					.30	.20		3.74
Carroll ‖	Raccoon						.18																									0.18
Cedar Rapids ‖	Cedar		T.	T.			.57	T.		.51	.30		.30				T.	.17	T.		.08			.06	T.				.13	T.		2.12
Charles City	do					.10	.35		.03	.03		.02					.35	.38		.07									.02			1.35
Clear Lake	do						.30																									
Clinton	Mississippi						.90		*	1.57		1.10						.24	.05				T.	.31					.36			4.53

TABLE 2.—*Daily precipitation for November, 1911. District No. 5*—Continued.

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Iowa—Continued.																															
Columbus Junction	Iowa					.05	.66			1.75		1.20						.29		.05			.30	T.					.13			4.43
Davenport	Mississippi					.59	.10		.13	1.57		.72	T.		T.	T.	.18	.12		.02			.25	T.	T.			.10	.06			3.84
Decorah	do					T.	.54	T.		.55	T.	.12	T.	T.	T.	T.	.44	T.		.10	T.		T.	T.								1.75
Delaware	do						.60	.02		1.82	.14	.34				T.		.23		.04									.04			3.23
Des Moines	Des Moines	T.		T.		.49	T.		.20	.10		.02					.29	.04	T.	.03				T.				T.	.05			1.22
Dubuque	Mississippi					.33	.19		.12	1.01	T.	.80	T.			T.	.10	.05		.04			.05	T.				.18	.17			3.04
Earlham	Raccoon	.05				T.	.44		.04	.20		T.	T.				T.	T.	.08					T.					.05			0.86
Elkader	Mississippi						.56			.75		.30	T.		T.	T.		.55		T.									.15			2.31
Elma	Wapsipinicon	T.		T.		T.	.60			.80		T.	T.		T.	T.	T.	.45		T.				T.					T.			1.85
Estherville ‖	Des Moines	.10	.05				.30	T.		.10		T.	T.	T.	.10	.05	.05	T.	T.	.10								.05				0.90
Fairfield	Skunk					.14	.63		T.	1.24	T.	.70						.12	.42	.04			.42	T.				T.	.11			3.82
Fayette	Mississippi	T.				.15	.37			.71	T.	T.	T.		T.	T.	T.	.45		.02				T.				T.	.07			1.77
Forest City ‖	Cedar	T.			T.		.03	.10		.05	T.	T.				T.		.25		.05				T.				T.	T.			0.48
Fort Dodge ‖	Des Moines	T.						.07		.14		.05	T.					.15		.03												0.44
Fort Madison	Mississippi					T.	.85		T.			1.40						.21		.20			.22						.20			3.08
Gilman	Iowa																														
Grand Meadow	Mississippi						.66	.02		.66	.22	.12	.02		.03			.50	T.	.05				T.					.07			2.35
Grinnell	Iowa					.10	.52		.20	.43		T.						.51		.05								T.	.10			1.91
Grundy Center	Cedar	T.				T.	.55			.35		T.						.36		.10				T.					T.			1.36
Guthrie Center	Raccoon	T.		T.			.38		.01	.12		.03						.12	T.									T.				0.66
Hampton	Cedar					.40	.05		.10	.06	.05	T.					.46	T.		.03												1.15
Humboldt	Des Moines	T.		T.			.25		.12			T.	T.					.14		.09												0.60
Independence	Wapsipinicon	T.					.63	.06		.65	.15					T.		.33		.10				T.					.05			1.97
Indianola	Des Moines	.01				.13	.29		.20	.22		.03						.32	.03	T.				T.				T.	.03			1.26
Iowa City ‖	Iowa						.65	T.		1.18	.23	T.	.47					.31	T.		T.			.11					.06	T.		3.01
Iowa Falls ‖	do	T.			T.		.44	.05		T.	.10	.05	T.				T.	.24	.03		.10				T.				T.	T.		1.01
Jefferson	Raccoon	.04		T.			.28		.03	.05		.01	T.					.09	.02	T.									T.			0.52
Keokuk	Mississippi	T.				.60	.19		.10	.15		1.12			T.			.26		.04			.26	T.				.04	.12			2.88
Keosauqua ‖	Des Moines						.53		.44	.26			.51					.12	T.		.03		.42		.01				.06	.05		2.43
Knoxville	do					.10	.40		.20	.34		T.					T.	.03		.40			.07	T.				.10	.20			1.84
Lacona	do	.03				.12	.40	.14		.06		.10	.03					.30	.06	.10			.01						.10	.10			1.55
LeClaire ‖	Mississippi						.85	.02		.92	1.19	.01	1.05	T.		T.	T.	.32	.03		.03			.28	T.				.27	.02			4.99
Marshalltown ‖	Iowa	.01	T.				.53	.03		.22	.24	.02	.02					.48	T.	T.	.14				T.				.02	.03			1.74
Mason City	Cedar						.33				.04							.40		.05												0.82
Monroe	Des Moines						.53			.56	.05							.54														1.68
Mount Pleasant	Skunk					T.	.57		T.	1.22	.27	.62	T.		T.		T.	.18		.02			.39	.13				.15				3.55
Muscatine ‖	Mississippi					.70				1.03	.95		.60					.28	.05		.03			.36					.22	T.		4.22
New Hampton	Wapsipinicon	T.				T.	.65	T.		.25			T.		T.		T.			T.									T.			0.90
Northwood	Cedar			.05		.11	.27			.50		.20	.10				.20	.40		.10									.05			1.98
Olin	Wapsipinicon						.65			1.30		.60	T.					.26		T.			.18	T.					T.			2.90
Osage	Cedar						.53			.11								.50		.05												1.19
Oskaloosa	Des Moines					.48			.08	.38							.21	T.		.02			.20					*	.03			1.40
Ottumwa	do					.13	.23		.07	.16		.02						.03		.06			.13					.01	.07			0.91
Pella	do	T.				.04	.52		.04	.56		T.					T.	.31	T.	.08			.11	T.				T.	.04			1.70
Perry	Raccoon						.43			.10		T.						.41	T.	.02				T.					T.			0.96
Plover	Des Moines			T.			.10		T.	.05		T.					T.	.20														0.35
Pocahontas	do			T.			.16			.04							.03	.20	T.	.05												0.48
Ridgeway	Mississippi	.01		T.			.75			.29	.20	.01	.01		.01		.67	.01	T.	.03	T.			.01					.04			2.04
Rockwell City	Raccoon			T.		.75				.15																			.10			0.90
Sac City	do			.05		T.	.40		T.	.03		T.	.05					T.		.10									.01			0.73
St. Charles	Des Moines	.05		T.			.31		.18	.21		.04	.01					T.	.50	.05				T.					.01			1.36
Sigourney	Skunk					.03	.55			.90		.25						.20		.06			.10						.12			2.21
Stockport	do						.66			.55	.05	.68						.21		.02			.24	.14					.06			2.61
Storm Lake	Raccoon	.18		T.			.09					T.						.02	.01	.06				T.					T.			0.36
Tipton	Cedar						.68		1.28	.03	.95							.49		.06			.09						.21			3.79
Toledo	Iowa	T.					.55			.60	.10							.33		.10								.05				1.73
Wapello	do					*	.62		*	1.12		.56						*	.10	.05			.16				*	.18				2.79
Washington	Skunk						.43			.04					T.	T.	.23	T.		.09					T.				.02			1.19
Waterloo ‖	Cedar	T.				.43	.02		.12	.28	T.	T.					.01	.44	.01	.04				T.					.03			1.50
Waukee	Raccoon	T.		T.		.05	.56	.02	.08	.25	.01	T.						.10		.10												1.42
Waverly	Cedar	T.				.15	.55			.52																	.06					0.93
Webster City	Des Moines				.01			.43			T.		T.	T.						.38	.05									.01			0.61
West Bend	do	.02					.16		.08			T.						.24		.10												1.25
Whitten	Iowa	T.		T.		T.	.80				.15	T.						.30		T.									T.			1.18
Winterset	Des Moines					T.	.50		.10	.25		T.					T.	.30	.03	T.				T.					T.			
Missouri.																															
Gorin	Mississippi					.60				.25		.90				.01		.10					.42					.07			2.34
Hannibal	do					.64	.18		T.	.01	.01	.87				.01	.03	.16	.02	T.			.17	T.	T.			.08	.12	T.		2.30
Louisiana	do					.25	.35			T.	.20		.72			.05		.33		T.				T.					.05			1.95
Mexico ‖	do						.82	.01			.01	T.	.62					.43		.01	T.			.22					.35	.01		2.48
Steffenville	do	T.				.22	.67		T.	.23		.45	.05					.30	T.	T.			.10	T.	T.				.20	.10		2.32
Sublett	do	T.				T.	.50	.20		1.00	T.	.40						.50					.10	T.					.05			2.75
Vandalia	do						.86											.84												.04		1.74
Warrenton ‖	do						.72	T.					.70					.36	.08	.01				.32					.27	.02		2.48
Indiana.																															
Collegeville	Iroquois						.44				.08	.85	T.	T.	.15	.10	T.	1.57		T.				T.	T.				.54	T.	T.	3.73
Knox	Kankakee			.06			.43				.09		.88		.21	.14		1.30			.05			.05	T.				.45	.13		3.79
Laporte	do	.10	T.			*	*	*	*	*	*	*	*	1.80		.20	T.	.75		.20				.07	.20				.32	.30		3.94
Plymouth	do		.46				.43	.07			.11	T.	.31		.22	.08		1.02			.23			.18	.08				.60	.31		4.10
Illinois.																															
Aledo	Mississippi						.71			1.19	.19	.90	.09		T.			.47		.04			.06	.24				.17			4.06
Alexander	Illinois					.16	.38			T.	.05	T.	1.17		.02			.26		.01			T.	T.				T.	.40	.02		2.47
Antioch	do						.60			.15	.58	1.70	.25		T.		.83				.60		.58									5.29
Astoria	do					.03	.58			.01	.03	.51	.50		T.		T.	.30	T.	.04			T.	.03				T.	.30			2.33
Aurora	do					.50				T.	.12	.90	.18		.11	T.		.55						.09	T.				.33			2.78
Beardstown ‖	do																														
Bement	Mississippi						.51			T.	.07		.15					1.18		T.				.12	T.				.35	.15		2.53
Bloomington	Illinois					.04	.46			T.	.03	1.67	.39				T.	.64		T.			T.	.03	T.			11	.45	T.		3.71
Cairo	Mississippi				.55	.99	.57			T.	T.	.13	.13					.12	.01	T.			.03	.62	T.				.04	T.		3.30
Carbondale	do					.20	.85				T.	T.	1.35		T.			.06		.11			.09	.62					.15	T.		3.34
Carlinville	Illinois					.22	.38			T.	.03		.64					.62		T.			.09	.14					.06			2.18
Carlyle	Mississippi					.30	.60						1.10					.50		.05				.55					.37	.04		3.51
Chester ‖	do						1.08				.04	T.	.78	.04	T.	.02		.08	.22	.06				.42	.04	.01			.56	.02		3.37
Clinton	Illinois																												.30			2.60
Coatsburg	Mississippi					.30	.48				T.	.91	T.					.53		.12	T.		.08	.60					.38	T.		4.34
Cobden	do					.24	1.35				T.	1.10						.55														

TABLE 2.—*Daily precipitation for November, 1911. District No. 5*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Illinois—Contd.																																
Dakota	Mississippi		T.				.80	.02		.91		1.40	T.		.01			.48		.05			.01	.09				.27	T.		4.04
Decatur	Illinois					.10	.41			.05	T.	.90	.40		.04		T.	.83		.05			.06		T.			.47			3.31
Dixon ‖	Mississippi						.70	.15		.40	1.10	.10	1.80			T.	T.	.75	T.					.18				.29			5.47
Du Quoin	do					1.30				T.		.53	T.		T.			.06		T.			.35					.27	.17		2.68
Dwight	Illinois						.45			T.	.05		.98		.02	T.		.69		T.	.01			.05	T.			.30	.02		2.57
East St. Louis ‖	Mississippi						.90						.95					.10	.20					.51				.56	.05		3.27
Edwardsville	do					.10	.65						.12					.50		.03				.27				.50			2.17
Elgin	Illinois					.62					.17		1.22		T.			.06			.05		.02					.32			2.46
Ewing	Mississippi					.11	1.20			T.	T.	T.	.72		T.			.33						.36				.34	T.		3.06
Fairview	Illinois																															
Galva	do					T.	.67			.61	.06	1.03	.12		T.		T.	.02		.02			.01	T.				.22			2.76
Grafton ‖	Mississippi						.72						.40					.40	.21	T.	.08			.73	T.			.46	.10		3.10
Greenville	do					.60	.35			.10	.06	.90	.15					.85		.09			.10					.12	.10		3.52
Griggsville	Illinois					.15	.78			T.	T.	.67	T.		T.			.30		T.			T.	T.	T.			.25	T.		2.15
Havana	do					T.	.56			.06	.03	.39	.27					.42		T.				T.				.28			2.01
Henry	do						.63			T.	T.	.60	.44		T.	T.		.47		T.				.07				.40	T.		2.61
Hillsboro	Mississippi					.18	.48				T.		.95		T.			.65		T.				.15				.30			2.71
Joliet	Illinois	T.				.04	.43			T.	.06	1.29	.03		.15	.02	.60	.09		.05			.01	T.			T.	.10			2.87
Kishwaukee	Mississippi						.79			.66	.71	.97	.23		.02			.84		.05			.12					.18			4.57
La Grange	Illinois						.60			T.	.10	T.	1.32		.06	T.		.76	T.	T.	.01			.02				.03			2.90
La Harpe	do					.34	.37			.27		.30	.13					.18		.02			T.	.13				.14			1.88
Lanark	Mississippi						.81	.01		.96	.19	1.20	T.		T.	T.	T.	.53		.05			.07					.16			3.98
La Salle	Illinois	T.				.18	.28			.05	T.	.86	T.		.01	T.	.25	.30		.01			.04	.02	T.			.09	.17			2.26
Lincoln	do					T.	.53			T.	.12		.02		T.			.30	T.	.02				T.					.50	.10		1.59
Loami	do					.10	.43			T.	T.	1.30	.30		T.			.50	T.	T.			T.	.02	T.			.10	.50	T.		3.25
Macomb	do					.20				.18	T.	.71	.24					.26	.01	.03			T.	.11					.34			
Manteno	do						.43			T.	.07		1.11		.12	.10		.75		.04				.04	.03				.36	.05		3.10
Martinton ‖	do						.37	T.			.05	T.	.08			.04	T.	.58	.30		T.			.10	T.				.28	.20		2.00
Mascoutah	Mississippi					.20	.67			T.			.77					.30		.02				.45	T.				.27	T.		2.68
Minonk	Illinois				T.		.35			.02	.03		.70		T.	T.		.52		.01				.05	T.				.38	.05		2.11
Monmouth	Mississippi					.20	.50		.57	.02		1.16						.16		T.			.16					.23				3.00
Morris	Illinois																															
Morrison	Mississippi						1.01			1.09	.91	.88	.03			.02		.37		.03			.02	.31					.40	.05		5.12
Morrisonville	Illinois					.11	.40			T.	.03		1.37					.52		.03			T.		T.			.28	T.			2.74
Mount Vernon ‖	Mississippi						1.02					T.	.84					.24						.30						.23		2.63
Nashville	do																															
Oregon	do						.80			.62	.86	1.50			T.			.70		.20		T.	T.	.20				.27	.06		5.21
Ottawa	Illinois						.62			.05	.03	.44	.36		.02	.03		.51		.02			T.				20				2.28
Pana	Mississippi				T.		.40			T.	.03		1.18					.56		T.				.03				.37	.02		2.59
Peoria	Illinois					.41	.24			.04		1.40	T.		T.		.02	.53		.03			.02	.01				.25	06			3.01
Pontiac	do	T.					.45			T.	.04	T.	1.35		T.	T.		.70		T.				.02	T.				.35	.04		2.95
Quincy ‖	Mississippi						.65	.03		.02			.64					.23	T.		.02			.22					.08	.03		1.92
Riley	do						.64			.34	.92	.91	.36		.02	.02		.96	T.		.07			.13		T.			.32	.01		4.70
Roberts	Illinois																															
Rockford	Mississippi						.72			1.36		1.08			T.		.56	.02		.05			.03	T.					.48			4.36
Rushville	Illinois					.47	.13			.15	.03	.82			T.		.04	T.		T.			.08	T.					.40			2.12
St. Charles	do	T.					.55	T.		T.	.17	T.	1.80		.08	T.		.75	T.	T.	.08			.04	T.				.35	T.		3.82
St. Peter	Mississippi					.30	.65			T.	T.		.80					.60		T.				.25					.30	.10		3.00
Sparta	do					.23	.82			T.	T.		.58	T.				.25		.06				.47	T.			T.	.30	T.		2.71
Springfield	Illinois					.49	.07			.08	.01	1.18	.02		.02		.02	.58		.08			.01	T.				.43	.11			3.10
Streator ‖	do						.43	.07		T.	.02		1.15			.01	T.	.61	T.		.01			.06	T.				.40	.10		2.86
Sullivan	Mississippi						.45			T.	.08		1.10					.84		T.				T.	T.				.55			3.02
Sycamore ‖	do						.55	.15		.24	.32	T.	.80			.01		1.20			.02			.15					.25	.05		3.74
Tiskilwa	Illinois						.63					.90			.02	T.				T.			.10						.40			2.05
Walnut	Mississippi						.61			.76	.18	.77	.24		T.	.02		.48		.02	.01			.16	T.				.51			3.15
Warsaw ‖	do						.83			.22		.67						.25					.17						.21			2.35
Waterloo	do					.25	.61			T.		T.	.71		T.			.19		.01				.53	T.			T.	.49	T.		2.79
White Hall	Illinois					.20	.55					.78	.23		T.			.64		T.			.04	T.	T.			T.	.50			2.94
Windsor	Mississippi						.53			T.	.20		.50					.90		T.				.20					.45	.02		2.80
Winnebago	do						.80			1.10	.32	1.28	.05					.50			.10		.10						.40			4.65
Yorkville	Illinois	T.					.50			T.	T.	.05	1.00		.15	.02		.25		.03	.05			T.					.03			2.08
Zion	Mississippi						.35			.75		1.02	.05		T.	T.		.57		.08			.03					T.	.56			3.41

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations, for November, 1911. District No. 5, Upper Mississippi Valley.*

Date.	North Dakota.										Minnesota.															
	Bottineau.§§		Devils Lake.		Lisbon.§§		Minot.§§		Pembina.§§		Collegeville.		Crookston.§§		Grand Meadow.		Montevideo.§§		Moorhead.		New Ulm.§§		Pine River Dam.		St. Paul.		Winnibigoshish.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	24	0	25	1	31	7	27	−1	.....	.....	36	15	27	15	29	13	39	13	28	12	25	16	31	14	27	17	27	14
2....	37	0	35	8	35	−1	37	5	.....	.....	32	15	33	7	33	12	37	9	33	4	36	12	29	13	31	17	36	17
3....	43	2	40	17	35	2	51	14	.....	.....	32	19	34	16	32	19	39	20	35	14	44	13	33	16	35	18	33	14
4....	50	9	50	21	32	16	53	18	.....	.....	38	24	44	20	40	25	43	15	48	18	42	26	34	13	39	30	38	19
5....	44	18	41	29	45	22	50	31	.....	.....	39	27	43	20	42	24	46	24	40	28	38	23	36	19	43	28	34	24
6....	40	21	44	24	37	32	37	21	.....	.....	40	33	38	33	40	34	46	33	42	34	46	26	36	24	39	36	37	32
7....	35	18	41	21	50	29	38	19	.....	.....	40	33	43	30	43	30	50	28	46	26	45	32	40	31	41	32	42	30
8....	40	20	40	25	42	20	41	20	.....	.....	39	33	46	31	39	26	44	28	46	32	44	31	36	24	40	30	41	28
9....	10	6	30	3	34	24	20	17	.....	.....	40	33	38	36	42	36	53	34	40	9	41	32	40	32	45	38	38	32
10....	0	−14	4	− 9	24	− 2	4	− 9	.....	.....	42	10	21	1	46	18	22	9	10	1	28	13	32	7	39	14	38	8
11....	2	−17	2	− 7	25	− 1	11	− 4	.....	.....	24	10	8	5	46	14	10	8	8	− 1	18	13	22	13	29	11	21	11
12....	3	−15	4	−11	15	− 9	10	− 8	.....	.....	15	− 2	8	− 6	17	− 3	10	− 3	6	− 6	10	1	13	− 2	12	3	13	− 2
13....	3	−14	5	− 9	10	− 8	10	2	.....	.....	13	2	8	− 7	32	2	23	0	10	− 6	32	1	13	5	21	4	16	− 6
14....	5	−10	8	−15	13	0	16	−10	.....	.....	26	10	9	− 2	30	22	26	12	12	− 5	31	10	11	3	33	12	17	3
15....	5	−18	9	−20	16	− 6	31	− 5	.....	.....	25	− 1	9	−20	24	7	27	4	8	−12	20	8	13	− 7	15	2	19	−12
16....	18	−14	26	− 4	24	− 4	24	− 8	.....	.....	21	10	23	−10	26	4	24	13	24	1	26	9	18	−16	27	5	18	−14
17....	16	−16	17	−10	18	4	32	− 4	.....	.....	25	13	12	− 2	30	19	23	15	22	1	26	18	13	− 7	30	11	21	0
18....	21	− 5	16	3	18	− 4	40	0	.....	.....	23	3	15	− 4	22	4	15	− 3	15	1	27	3	20	3	19	4	21	8
19....	28	12	28	11	25	8	35	20	.....	.....	22	4	20	− 6	31	5	35	5	25	2	35	4	20	−15	25	0	22	− 7
20....	25	12	28	10	20	10	41	11	.....	.....	28	14	26	7	32	14	31	5	26	3	31	8	25	5	29	14	22	3
21....	26	9	27	7	20	− 1	36	13	.....	.....	27	12	31	− 3	32	7	34	2	33	2	36	6	23	−12	30	6	26	6
22....	22	12	25	2	24	15	21	18	.....	.....	31	22	28	2	36	26	33	15	29	8	43	14	28	12	35	20	28	23
23....	19	−11	15	−10	29	− 3	28	−10	.....	.....	28	6	12	− 5	28	5	10	1	8	− 2	10	6	18	6	20	5	26	4
24....	36	−11	34	10	39	− 4	41	−11	.....	.....	28	2	26	− 3	27	1	24	− 5	32	− 2	27	− 1	24	− 5	30	− 2	27	0
25....	36	12	37	25	42	10	43	25	.....	.....	36	20	37	6	41	18	42	5	38	17	43	18	37	10	38	17	40	15
26....	32	20	34	19	30	27	34	27	.....	.....	34	25	35	24	46	23	37	25	34	25	39	23	36	30	36	22	32	20
27....	15	15	23	− 1	30	16	27	18	.....	.....	34	20	26	18	45	25	24	15	25	6	27	23	32	15	34	17	31	14
28....	16	−14	15	−12	20	− 4	25	− 5	.....	.....	24	10	10	−10	27	9	13	0	7	− 6	23	11	18	1	17	5	20	− 4
29....	28	−10	32	12	37	− 5	39	12	.....	.....	33	3	28	− 5	25	2	25	− 1	35	6	42	3	30	4	39	4	33	0
30....	30	9	32	20	.....	29	39	25	.....	.....	37	19	32	7	40	19	38	10	37	17	45	11	36	12	37	15	40	14
Mns..	23.6	0.9	25.6	5.3	28.6	7.3	31.4	8.0	.....	.....	30.4	14.8	25.7	6.5	34.1	15.3	30.8	11.2	26.7	7.6	32.7	13.8	26.6	8.3	31.2	14.5	28.6	9.8

Date.	Wisconsin.														Iowa.											
	Delavan.		Eau Claire.		La Crosse.		Madison.		Mauston.		Spooner.		Wausau.		Algona.		Cedar Rapids. §§		Charles City.		Davenport.		Des Moines.		Dubuque.		Keokuk.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	35	23	33	18	31	22	32	21	36	24	31	14	37	22	31	15	31	28	25	19	33	21	33	23	31	22	33	23
2....	36	17	34	17	35	20	33	19	36	18	31	10	31	16	32	11	33	18	33	13	35	18	33	16	36	19	35	18
3....	35	15	39	14	36	18	34	20	35	16	36	14	38	16	32	17	37	18	34	17	38	24	33	25	36	21	42	26
4....	38	15	34	27	36	28	35	31	35	30	33	26	35	21	44	27	40	23	42	28	40	34	46	33	39	22	43	35
5....	49	30	41	32	45	27	45	31	43	22	39	25	37	26	45	27	48	28	44	27	51	37	45	32	49	31	46	36
6....	47	40	42	36	44	38	46	37	46	37	37	33	41	34	41	36	46	32	42	38	49	42	47	39	46	41	55	41
7....	47	35	42	33	42	30	44	33	45	35	40	27	41	35	44	32	43	35	43	30	46	34	48	35	42	33	51	36
8....	47	24	41	25	43	26	43	29	42	24	40	26	41	24	44	28	46	26	41	28	49	28	48	30	44	27	52	34
9....	46	36	41	36	45	40	46	36	43	36	39	22	38	34	47	37	51	27	48	40	51	40	53	44	49	39	56	45
10....	56	44	44	21	47	29	51	40	46	33	43	15	44	29	46	17	63	33	48	22	62	44	48	31	60	37	64	45
11....	73	43	37	24	43	16	70	20	66	34	34	15	61	35	36	7	72	35	44	10	76	14	48	10	70	16	79	14
12....	43	12	26	5	16	8	20	7	34	10	17	4	48	9	10	0	16	10	10	3	20	9	16	4	16	8	17	11
13....	25	7	22	4	32	6	27	7	28	6	12	2	18	− 1	36	2	34	8	35	6	31	12	38	11	31	9	32	13
14....	29	24	31	17	31	26	30	24	30	24	31	12	28	15	39	23	46	12	35	20	34	26	45	30	34	27	39	28
15....	30	20	29	4	26	11	30	16	28	12	25	3	27	14	24	10	26	21	23	12	30	22	32	21	30	20	34	26
16....	32	12	23	0	34	11	32	14	28	10	22	7	23	− 1	31	13	42	18	35	15	42	21	43	21	36	19	48	23
17....	43	29	32	22	34	21	39	27	33	25	31	20	30	20	31	16	38	20	34	13	48	26	41	27	39	23	59	29
18....	31	19	29	10	22	13	27	17	30	16	27	14	32	19	29	12	30	18	26	11	33	20	38	23	27	15	37	29
19....	32	15	23	− 2	28	9	28	12	25	10	24	3	29	6	39	18	37	17	35	12	36	18	48	30	35	14	44	28
20....	32	19	26	15	29	22	30	24	30	25	24	6	31	11	37	18	35	19	33	15	37	19	43	32	36	23	42	30
21....	32	16	29	17	32	23	31	22	28	24	28	16	32	20	37	13	35	18	33	11	37	20	42	23	36	20	41	25
22....	35	22	39	22	43	27	35	24	37	20	35	25	35	18	36	24	39	17	42	25	43	31	46	27	39	31	52	32
23....	35	22	31	17	27	14	30	19	35	20	25	6	36	21	26	8	23	22	25	9	31	19	27	12	32	19	32	16
24....	30	15	22	− 1	30	7	28	14	35	20	20	5	25	6	35	4	30	9	31	5	31	13	36	11	32	13	32	14
25....	38	22	36	11	43	21	40	22	40	18	34	1	33	13	49	20	46	10	48	20	44	25	53	26	47	23	48	26
26....	42	27	37	18	42	26	42	32	40	25	36	12	35	16	50	22	51	23	45	23	52	32	53	31	48	29	55	34
27....	42	30	35	30	35	27	37	32	35	25	32	17	36	30	37	18	36	25	34	22	44	29	37	21	42	29	49	27
28....	32	20	32	13	27	10	32	17	35	22	18	7	34	19	19	4	22	21	22	6	29	15	21	9	29	13	27	15
29....	21	2	33	4	35	3	23	4	30	11	30	3	27	0	39	2	28	3	37	3	23	5	36	6	29	5	22	4
30....	34	15	35	16	40	22	36	19	35	21	32	11	37	15	48	21	42	3	43	22	39	22	48	28	40	22	38	17
Mns..	38.2	22.3	33.3	17.0	35.1	20.0	35.9	22.3	36.3	21.8	30.2	11.8	34.7	18.1	36.5	16.8	38.9	19.9	35.7	17.5	40.5	24.0	40.9	23.7	38.7	22.7	43.5	26.0

TABLE 3.—*Maximum and minimum temperatures at selected stations, for November, 1911. District No. 5*—Continued.

Date.	Missouri, Hannibal.		Indiana, Laporte.		Illinois.															
					Cairo.		Greenville.		La Salle.		Monmouth.		Mount Vernon.§§		Peoria.		Springfield.		Winnebago.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	39	24	43	30	51	33	48	26	37	23	35	25	47	32	41	22	42	24	35	23
2	35	20	34	27	37	25	38	21	35	19	39	16	31	20	36	17	34	20	35	18
3	38	26	38	19	44	29	41	26	38	22	37	18	45	20	38	19	39	25	36	16
4	45	34	41	20	44	36	44	35	40	34	45	32	50	28	41	31	47	35	39	31
5	47	34	.....	.....	52	41	49	40	51	36	53	33	57	34	50	36	49	38	50	32
6	58	46	.....	.....	69	52	58	46	52	45	50	39	64	44	52	42	56	44	47	40
7	53	36	.....	.....	58	46	54	38	49	34	53	34	60	43	51	30	51	38	50	36
8	56	36	.....	.....	56	45	54	40	50	28	53	27	66	42	51	28	53	36	45	25
9	60	48	.....	.....	60	44	54	23	51	39	51	35	58	44	54	40	53	41	50	43
10	72	47	.....	.....	67	57	64	50	63	48	60	39	68	42	62	48	66	47	57	43
11	82	16	72	.....	78	36	75	37	76	14	78	24	80	57	77	17	76	19	75	38
12	19	11	.....	10	36	19	37	14	18	13	24	10	28	14	18	12	19	13	38	11
13	31	16	.....	.....	31	18	28	14	29	13	31	11	32	12	29	12	28	13	29	9
14	45	28	.....	.....	50	30	42	27	32	26	34	24	48	15	33	25	40	25	33	23
15	39	28	30	15	66	38	49	28	29	20	34	23	60	29	34	23	39	27	30	20
16	56	27	32	12	63	33	49	27	36	19	50	18	59	28	44	22	47	25	37	16
17	61	30	53	26	63	35	57	33	53	27	50	32	60	28	53	28	56	32	45	30
18	40	29	38	26	56	32	41	30	32	24	36	25	43	28	36	27	40	30	31	16
19	47	31	35	21	54	36	40	33	36	19	35	22	44	37	38	21	41	30	30	15
20	44	31	35	28	52	40	45	31	38	23	37	25	46	36	37	26	40	33	33	23
21	43	27	38	25	50	32	42	26	38	22	40	19	46	25	38	22	38	27	35	20
22	52	34	40	21	55	35	50	30	43	30	44	29	54	25	45	30	48	30	34	28
23	34	20	35	28	48	28	42	26	39	22	33	20	46	30	40	20	42	22	32	16
24	33	16	30	20	30	25	32	26	30	20	31	12	31	21	31	18	31	20	30	22
25	49	26	39	17	50	24	42	25	44	26	45	12	47	21	45	22	45	25	41	24
26	58	34	48	25	60	36	57	32	49	31	52	34	59	24	50	28	54	34	49	28
27	47	29	46	31	55	41	51	37	51	34	44	34	50	32	53	32	54	36	46	33
28	29	14	43	28	48	23	40	20	34	21	34	19	32	28	32	18	39	19	39	21
29	20	6	30	12	25	19	23	15	24	9	19	2	24	17	19	6	20	10	22	2
30	38	19	32	12	45	18	37	16	36	17	40	15	40	15	35	13	37	16	34	14
Mns.	45.7	27.4	[a]39.6	[a]21.6	51.7	33.5	46.1	29.6	41.1	25.3	42.2	23.6	49.2	29.0	42.1	24.5	44.1	27.8	39.6	23.9

[a], [b], [c], etc., indicate respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1911.

DISTRICT No. 6, MISSOURI VALLEY.

MONTROSE W. HAYES, District Editor.

GENERAL SUMMARY.

Weather that was considerably colder than is usual in November prevailed throughout the district. Over the northern part of the Rocky Mountain slope it was wetter than in the average November, but in the remainder of the drainage area there was no decided departure from the normal. The most marked feature of the month was the cold wave that appeared over Montana on the 8th and affected the entire district before it passed to the east of the Mississippi River. The area of high pressure that caused or was coincident with the cold, covered the Dakotas and Montana on the 10th, and to the south of it, over Colorado, a pronounced atmospheric depression formed. This depression was accompanied by rain and unseasonably warm weather; it moved eastward and northeastward from Colorado and passed into the Mississippi Valley and upper Lake country the afternoon of the 11th, and in its path the cold wave was felt to the greatest extent. The sudden fall in temperature which was accompanied in many places by high winds, thunderstorms, rain with some hail, then sleet and finally snow, was among the most pronounced and abrupt of record. The range between the maximum and the minimum temperatures on the 10th in southern Wyoming, Colorado, and extreme western Kansas, and on the 11th in the Kansas and lower Missouri Valleys was unusually great, especially in Missouri and southern Iowa, where it amounted to 70° at some stations, but this was not so remarkable as the abrupt fall produced by the advance portion of the cold wave. In St. Louis the temperature was 75° at 6.10 p. m. on the 11th, when the change began, and in 10 minutes it had fallen to 49°, and by 1 a. m. of the 12th it had fallen to 17°. A second cold wave crossed the district between the 27th and the 30th, and while the temperatures accompanying it were in some places lower than at any other time during the month, it was not felt to the same extent the former was, as the change to colder was rather gradual. Transportation interests and shippers of perishable produce were most affected by the severe weather of the month. Most outdoor activities were not interfered with to any great extent.

TEMPERATURE.

There was no station in the district at which there was an accumulated excess in temperature. In Montana, northern Wyoming, and the Dakotas the average daily deficiency was 7° to 10°, and in the remainder of the district it ranged between 3° and 6°. In a territory as large as the Missouri River drainage area, in which the range in elevation is so great, it is somewhat unusual to have temperature departures so uniformly in one direction. Just before the cold wave of the 8th–12th there were several days with a mean temperature above the normal, and during the last third of the month there were a few days with a small departure above the normal, but in the greater part of the month the daily means were low, and the two general cold waves gave means for the month considerably below the seasonal average. The temperatures of the cold wave of the 8th–12th were more than 30° below zero in Montana and Wyoming, and as far to the southeastward as Missouri there were localities in which the thermometer readings were several degrees below zero. In the one of the 27th–30th the lowest temperature of the month occurred in a few widely separated sections, but as a rule the weather was not quite as cold as in the first one. The highest temperature of the month was 83° on the 11th at Crocker, Mo., and the lowest was 36° below zero at Augusta, Mont., on the 11th.

PRECIPITATION.

In the mountain and foothill country to the north of Colorado, in North Dakota and that portion of South Dakota lying to the west of the Missouri River, the precipitation, which was mostly in the form of snow, was above the normal. In the drainage area of the Osage River, in Missouri, it also was greater than the average for November. In the other portions of the district it was either normal or somewhat deficient. There was a great deal of cloudy, threatening weather, and the precipitation was well distributed through the month, but generally there was more during the first 15 days than during the latter half of the month. The greatest amount for the month was 5.55 inches at Corona, Colo., and the greatest in 24 consecutive hours was 1.79 inches at Bolivar, Mo., on the 22d.

Snow was general, but it was light in the lower third of the district. In the Dakotas, Montana, and northern Wyoming it was heavy generally, and was very heavy in some localities. It was drifted by strong and continuous winds and interfered with the operation of railroad trains. The greatest fall for the month was 67 inches at Woodrock, Wyo. At the end of the month the ground was practically bare except in North Dakota, the Black Hills of South Dakota, and in the mountain country. The following are special remarks made by the section directors on snowfall in that portion of the Rocky Mountains drained by the Missouri River:

Montana.—Heavy snows fell throughout the mountain districts, and there was an unusual amount at high elevations at the close of the month.

Wyoming.—The snowfall was unevenly distributed; the greatest amount was in the northwestern part of the State.

Colorado.—Thus far the weather conditions in the mountains have been favorable for the water supply. October was wetter than usual and the ground is filled with moisture. During November the precipitation was in the form of snow, and although the distribution was irregular the amount as a whole was greater than it normally is. At the close of the month the average depth on the South Platte watershed, at an average elevation of 9,000 feet, was 8.9 inches; on the North Platte watershed there was an average depth of 7.5 inches at an average elevation of 8,500 feet.

RIVERS.

Most of the larger streams of the district to the north and west of Nebraska were frozen at the end of the month. The Missouri River at Pierre, S. Dak., froze over on the 13th; this was the earliest closing of record, and the thickness of the ice on the 30th averaged 9 inches. In the lower and open part of the Missiouri River the stages were somewhat lower than usual, but they were very uniform, as the precipitation was sufficient to keep the water up to a materially stationary level, but was not heavy enough to cause rises of more than a few tenths. There was some floating ice in the lower river at times during the latter half of the month, but apparently none of it reached St. Louis.

TABLE 1.—*Climatological data for November, 1911. District No. 6, Missouri Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Arapahoe	Fremont		2								0.18		0.07	1.8	4	10	19	1	e.	A. E. Deitz.
Barnum	Johnson	5,500	6								1.23		0.50	14.3	6	13	10	7	w.	Thos. Freeguard.
Basin	Bighorn	3,862	12	28.5	− 3.9	66	19	− 24	11	54	0.34	+ 0.20	0.27	3.8	2	21	6	3	nw.	O. J. Robertson.
Bennett	Carbon		2								0.69		0.17	6.9	9	18	5	7	w.	Chas. C. Young.
Big Creek Station	....do	7,500																		U. S. Forest Service.
Burns	Laramie	5,400	2																	Alex. Hastie.
Casper	Natrona	5,101	2	36.5		69	22	− 9	11†	55	0.95		0.40	9.5	6	15	1	14	sw.	M. C. Cook.
Centennial	Albany	8,074	8	26.0		46	20	− 5	28	34	1.33		0.42	15.1	13	11	1	18	w.	Louis A. Gregory.
Cheyenne	Laramie	6,088	40	30.4	− 4.5	57	20	− 9	11	54	0.59	+ 0.18	0.38	6.1	7	11	17	2	nw.	U. S. Weather Bureau.
Chugwater	....do	5,282	10	34.2•	− 1.9	64	15	− 10	12	52•	0.60	+ 0.08	0.20	6.0	3	14•	9•	2•	w.	A. H. Woolever.
Clark	Park	4,320	5	30.4		54	25	− 14	12	50	1.91		0.66	24.5	6	6	12	15	w.	Chas. A. C. Snow.
Cody	....do	5,000	4	27.7		55	20	− 21	12	52						12	9	9	w.	D. A. Tinkcom.
Crazy Creek	....do	6,828		17.8		42	20	− 34	28	62	2.61		0.54	39.5	15	9	3	18	w.	Jas. Smith.
Dome Lake	Sheridan	8,821	3	19.2		36	21	− 8	20	39	1.75		0.25	35.0	12	10	13	7	w.	Abe Mills.
Douglas	Converse	4,793	2	29.6		58	20	− 17	11	59	0.48		0.17	4.4	5				nw.	Henry C. Miller.
Dubois	Fremont	6,909	4	26.4		49	20	− 12	11	43	1.15		0.40	11.5	5				nw.	Dr. F. H. Welty.
Eatons Ranch	Sheridan	4,600	6	30.3		63	25	− 12	11	39	2.30		0.50	23.0	7	14	12	4	nw.	F. A. Eaton.
Echeta	Crook	4,200	2								2.13		0.76	21.0	7	18	6	6	n.	M. R. Hunter.
Elk Mountain	Carbon		6								2.06		0.65	42.0	7					Wm. Richardson.
Encampment	....do	7,322	2	28.0•		52	15	− 5	29	47•	0.48		0.16		8	3•	17•	5•	sw.	U. S. Forest Service.
Ervay	Natrona	6,400	2	26.2		55	21	− 13	11	42	0.67		0.20	8.0	5	14	10	6	sw.	Frank Jameson.
Fort Laramie	Laramie	4,270	33	33.1	− 1.7	63	10†	− 11	12	68	1.10	+ 0.76	0.60	11.0	2	14	5	1	w.	John Hunton.
Fox Park	Albany	9,015	1	31.0•		70	21	− 8	23	5•	2.80		0.48	35.0	8	7•	8•	8•	w.	U. S. Forest Service.
Germania	Bighorn	4,312		23.4		49	26	− 23	12	43	0.30		0.15	6.1	3	18	6	6	se.	L. E. Watson.
Gillette	Crook	4,546	5	24.5		50	4	− 14	11	28	1.80		0.38	18.0	9	11	14	5		S. D. Perry.
Horse Creek	Fremont																			U. S. Forest Service.
Hunters Station	Johnson	8,000	5	21.0		49	20	− 23	12	54	1.32		0.47	20.0	7	20	3	7	w.	Do.
Hyattville	Bighorn	4,632	12	28.5	− 7.5	54	20	− 19	12	51	0.26		0.20	5.3	3	13	9	8	w.	Wm. Booth.
Jireh	Converse	5,050	1								1.00		0.30	10.0	5	10	14	6	nw.	P. L. Ford.
Kirtley	....do		7	28.2		54	21	− 10	12	53	0.30		0.30	3.0	1	18	5	7	nw.	D. M. Zum Brunnen.
Kirwin	Park	9,187	3																	C. L. Tewksbury.
Knowles	Crook	4,500	2								1.89		0.65	27.9	9					Geo. A. Knowles.
Lagrange	Laramie	4,510	1	33.8		61	20	− 15	12	51	0.30		0.15	2.5	4	20	4	6	w.	Owen Shupp.
Lander	Fremont	5,372	19	26.7	− 2.0	57	20	− 14	11	48	0.68	+ 0.08	0.30	9.5	6	10	10	10	ne.	U. S. Weather Bureau.
Laramie	Albany	7,188	20	27.2	− 4.6	54	20	− 8	12	36	0.39	+ 0.14	0.15	3.9	8	20	8	2	sw.	University of Wyoming.
Leo	Carbon	6,878	10																	C. A. Cowdin.
Lolobama Ranch	Park	7,052	7	20.1		45	21	− 18	28	44	0.49		0.15	22.5	6	11	11	8	w.	Mary E. Painter.
Lovell	Bighorn	3,825	6	26.8		51	20	− 20	12	38	0.54		0.17	5.5	5	6	13	11	n.	R. Fred Harrison.
Lusk	Converse	5,007	21	15.7	− 4.8	55	5†	− 11	11	36										D. E. Goddard.
Manville	....do	5,050	1								0.53		0.30	8.0	5	20	7	3	sw.	C. A. Sherman.
Moorcroft	Crook	4,111	8	25.3		55	5	− 15	12	40•	1.43		0.55	11.5	5	12•	9•	8•	n.	C. T. McCampbell.
Moore	Albany	6,000	10	31.0f	− 6.4	62	13	− 9	11	52f	0.58	+ 0.08	0.19	5.9	5	10f	7f	7f	w.	Edwin Moore.
Newcastle	Weston	4,319	4	26.4		52	4	− 19	12	45	1.52		0.50	15.0	7	14	12	4	n.	Dr. S. W. Johnson.
Pathfinder	Natrona	5,735	5	28.6		51	21	− 20	12	49	0.52		0.14	10.0	5	12	9	9	sw.	U. S. Reclamation Service.
Pinebluff	Laramie	5,038	9	32.1•		62	22	− 8	12	60•	0.31		0.14	3.1	3					C. L. Beatty.
Pine Ridge	Crook										1.75		0.80	15.5	6	7	9	14		J. E. S. Altaffer.
Powell	Park	4,376	4	26.8		52	19	− 18	23	45	0.31		0.17	3.1	3	5	15	10		U. S. Reclamation Service.
Rambler	Carbon	9,232	1																	U. S. Forest Service.
Rawlins	....do	6,748	9	26.8		48	20	− 9	28	45	1.14		0.36	12.7	10	12	11	7	w.	E. J. Ehrenfeld.
Riverton	Fremont	4,960	2	27.1		61	20	− 20	12	51	0.17		0.08	3.0	3	18	12	0	e.	F. H. Allyn.
Rockypoint	Crook										1.69		0.45	17.8	9	14	4	12	s.	P. Woxen.
Saratoga	Carbon	6,785	13	27.7	− 4.0	51	20	− 9	28	41	0.67	+ 0.08	0.28	9.9	10	14	10	6	sw.	G. Frederick Clark.
Seven Mile Creek	....do			22.8f		47	3	− 7	12	40f	0.65		0.15	24.0	5	12f	5f	7f	w.	U. S. Forest Service.
Sheridan	Sheridan	3,790	16	26.1	− 6.3	58	25	− 15	12	40	0.58	− 0.03	0.37	5.9	10	6	6	18	nw.	U. S. Weather Bureau.
Shoshone Dam	Park	5,385	5	32.2		58	20	− 10	11	40	0.73		0.24	12.5	5	10	14	6	w.	U. S. Reclamation Service.
Soldiers Home	Johnson	4,635	19	23.8	−11.8	54	21	− 23	12	44	1.00	+ 0.51	0.40	10.0	6	13	0	17	s.	Joel C. Smiley.
South Pass City	Fremont	7,873	9	18.8		44	3	− 26	28	43	1.90		0.48	24.4	14	11	8	11	s.w.	John Sherlock.
Sundance	Crook			22.8		47	21	− 21	12	36	2.23		0.60	22.3	10	17	2	11	w.	Geo. W. Ashdown.
Thermopolis	Fremont	4,350	7	27.3		58	3	− 17	12	40	0.71		0.34	7.0	5	16	12	2	n.	A. L. Duhig.
Verona	Sheridan	4,360	2								0.70		0.31	8.6	5	7	13	10	nw.	O. A. Roode.
Wheatland	Laramie			35.3		62	15	− 11	12	54	0.08		0.03	0.8	4	17	6	7	w.	A. deF. Snively.
Wiants Ranch	Carbon	7,400	1								0.30		0.10		6	10	12	8	sw.	Ira G. Wiant.
Wiley	Park	5,375	2	27.4		55	20	− 18	8	54	0.75		0.20	5.0	6	16	7	7	w.	Thos. S. Harrison.
Woodrock	Sheridan										5.00		0.75	67.0	13	11	8	11	sw.	U. S. Forest Service.
Worland	Bighorn			24.5		52	4†	− 26	12	40	0.39		0.20	2.7	4	15	8	7	nw.	Prof. B. C. Buffum.
Wyncote	Laramie	4,207	4	33.2		63	10	+ 12	12	47	0.10		0.07	1.0	2	17	13	0	nw.	U. S. Reclamation Service.
Yellowstone	Yellowstone Park	6,200	23	21.2	− 8.1	43	20	− 15	10	37	2.33	+ 0.89	0.83	23.9	14	5	12	15	s.	U. S. Weather Bureau.
Fairview Dome	....do	7,000	6	13.6		47	20	− 30	28†	50	2.23		0.40	20.0	8	17	7	6	sw.	U. S. Army.
Fountain	....do	7,220	5	18.4		49	1	− 25	12†	52	2.93		1.00	22.5	7	4	11	15	w.	Do.
Gallatin	....do										2.01		0.28	40.0	14	8	10	12		Do.
Grand Canyon	....do	7,900	4	19.8		52	9	− 20	12	39	2.48		0.42	45.0	13	11	4	15	n.	Do.
Lake Yellowstone	....do	7,733	7	17.9		41	1	− 18	28	39	1.90		0.40	28.5	8	15	0	15	sw.	Do.
Norris	....do	7,575	7	16.6		40	20	− 22	12	49	2.79		0.37	55.6	18	8	13	9	w.	Do.
Riverside	....do	6,500	5	18.9		61	3	− 31	28	72	2.95		1.00	31.0	10	14	0	16	w.	Do.
Sylvan Pass	....do	7,000	4	20.2		44	20	− 21	28	44	4.10		0.70	47.0	17	11	0	19	w.	Do.
Thumb	....do	7,772	5	18.9		45	15	− 16	28†	39	2.67		0.60	53.5	11	18	0	12	sw.	Do.
Tower Falls	....do	6,250	2	14.1		36	19	− 18	11†	32	1.04		0.40	21.0	6	8	0	22	w.	Do.
Upper Geyser Basin	....do	7,395	7	19.8		46	23	− 25	28	48	2.19		0.50	43.7	10	14	1	15	sw.	Do.
Montana.																				
Adel	Cascade	5,200	13	32.3	− 1.7	55	20	− 25	11	53	1.31	+ 0.39	0.40	12.0	8	11	5	14	w.	Mrs. B. F. Burch.
Agricultural College	Gallatin	4,700	14	25.8	− 5.6	55	20	− 15	11†	47	1.00	+ 0.02	0.34	10.0	5	4	23	3	sw.	Prof. E. Burke.
Augusta	Lewis and Clark	4,071	13	21.8	− 8.9	50	2†	− 36	11	54	1.16	+ 0.53	.....	14.5	6	14	8	8	w.	C. C. Covington.
Babb	Teton	4,461	5	22.5		50	1	− 31	10	49	3.09		1.00	36.0	9	11	5	14	sw.	U. S. Reclamation Service.
Badger Creek	....do	4,060																		Do.
Bald Butte	Lewis and Clark	6,500	2								1.53		0.36	25.6	11	5	2	23		M. W. Alderson.
Bigtimber	Sweet Grass	4,072	5	31.2		59	20	− 18	11	43	0.56		0.28	5.0	3	17	6	7	w.	F. A. Severance.
Bigtimber Creek	....do		2								1.47		0.58	14.5	8	7	20	3	w.	J. T. Mjolsness.
Billings	Yellowstone	3,115	16	26.2	− 7.6	57	4†	− 18	11	43	0.28	− 0.66	0.15	.....	6					U. S. Weather Bureau.
Blackleaf	Teton	4,260	4	23.4		57	2	− 21	10	48	1.52		0.35	.....	12	10•	11•	8•	w.	Adolph Aman.
Bloomfield	Dawson		3																	E. B. Chaney.
Boulder Nursery	Jefferson	4,920	17																	U. S. Forest Service.
Bowen	Beaverhead	6,060	5	13.6		38	19	− 30	28	50	1.14		0.22	12.7	13	11	7	12		B. B. Lawrence.
Bridger	Carbon	3,664	3	25.5		50	3†	− 24	12	43	0.37		0.12	10.0	4	4	14	12	n.	L. E. Gard.
Broadview	Yellowstone		5	23.4		55	3	− 22	12	55	0.29		0.13	7.0	3	20	8	2	w.	Mabel Sudduth.

TABLE 1.—*Climatological data for November, 1911. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Montana—Continued.																				
Busby	Rosebud		8	23.9	.....	54	7	− 20	12	46	0.62	.....	0.17	10.8	10	7	15	8	nw.	Rev. G. A. Linscheid.
Busteed	Sweet Grass		4	29.0	.....	56	8	− 24	12	67	0.36	.....	0.11	6.0	6	11	12	7	w.	T. H. Busteed.
Cabin Creek	Beaverhead		2	.....	.....	.....	.....	.....	.....	.....	0.34	.....	0.15	10.0	8	17	7	6	n.	W. J. Crowell.
Canyon Ferry	Lewis and Clark	3,644	13	27.3	− 5.5	51	14	− 16	11	37	0.08	− 0.36	0.06	4.0	2	13	5	12	nw.	A. C. Pratt.
Cascade	Cascade	3,361	7	27.8	.....	61	20	− 22	11	52	0.87	.....	0.39	7.5	7	9	10	11	sw.	Dr. E. E. James.
Chessman Reservoir	Lewis and Clark	5,275	3	23.0	.....	50	20	− 27	11	40	1.58	.....	0.55	25.8	11	14	0	16	nw.	C. D. Schmidt.
Chester	Chouteau	3,140	7	19.1	.....	50	3†	− 25	11	40	1.24	.....	0.52	12.4	7	16	2	12	sw.	E. D. Keith.
Chinook	....do	2,502	13	19.4[m]	− 8.2	55[a]	3	− 19[m]	11	39[n]	.....	.....	.....	.....	.....	7[o]	5[o]	3[o]	w.	T. O'Hanlon Co.
Clearcreek	....do		6	21.6	.....	54[a]	3	− 17[a]	9†	47[a]	1.85	.....	0.67	14.3	7	10[b]	10[b]	8[b]	sw.	Cortez Sedgewick.
Clemons	Lewis and Clark	4,672	2	.....	.....	.....	.....	.....	.....	.....	0.73	.....	0.25	13.7	8	4	12	14	w.	Frank Eberl.
Clydepark	Park		1	.....	.....	.....	.....	.....	.....	.....	0.66	.....	0.15	8.0	15	5	10	15	w.	Dr. T. B. Marquis.
Conrad	Teton		...	22.6	.....	49	3	− 18	10	33	0.22	.....	0.18	2.2	....	10	16	4	sw.	I. S. Martine.
Copper	Meagher		6	.....	.....	.....	.....	.....	.....	.....	0.67	.....	0.16	10.5	8	10	8	12	nw.	Orville Harris.
Crow Agency	Rosebud	3,041	30	24.8	− 8.2	54	3†	− 24	12	47	1.21	+ 0.43	0.35	8.1	10	3	6	21	nw.	Ira R. Bamber.
Culbertson	Valley	1,927	8	.....	.....	.....	.....	− 12	11	....	0.60	.....	0.40	6.0	2	15	13	2	nw.	G. H. Coulter.
Cut Bank	Teton	3,700	12	17.0[l]	− 9.6	49[l]	27	− 29[l]	10	44[l]	.....	.....	.....	.....	.....	7[l]	0[l]	11[l]	.....	Chas. N. Thomas.
Denton	Fergus	3,500	3	25.5	.....	54	3	− 22	11	37	0.62	.....	0.20	8.2	9	12	8	10	nw.	P. J. Greisenauer.
Dillon	Beaverhead	5,147	14	32.2	− 2.8	64	26	− 21	10	51	1.76	+ 0.83	0.45	17.5	7	15	6	9	sw.	Prof. J. E. Monroe.
Dirty Creek	Meagher	6,000	2	.....	.....	.....	.....	.....	.....	.....	1.91	.....	0.34	20.9	11	9	6	15	w.	Lewis Cameron.
Dry Creek	Broadwater	5,500	2	.....	.....	.....	.....	.....	.....	.....	0.54	.....	0.20	5.0	5	4	9	17	w.	J. C. Stuart.
Dry Wolf Camp	Cascade	6,000	2	.....	.....	.....	.....	.....	.....	.....	0.60	.....	0.30	20.5	9	15	4	11	nw.	Mrs. R. J. Eveleth.
East Gallatin River	Gallatin	6,000	3	.....	.....	.....	.....	.....	.....	.....	1.57	.....	0.31	19.0	14	9	5	16	w.	John Eberhart.
Ekalaka	Custer		11	25.6	− 6.7	53	7†	− 18	11†	47	.....	.....	.....	.....	.....	17	4	9	w.	Wm. Freese.
Elkhorn	Jefferson	6,576	3	.....	.....	.....	.....	.....	.....	.....	1.19	.....	0.30	16.0	14	4	10	16	w.	James Heagan.
Fallon	Custer	2,208	7	21.5	.....	55	4	− 20	12	47	0.10	.....	0.07	1.0	2	11	14	5	w.	Mrs. A. C. Gifford.
Fish Creek	Silver Bow	8,500	2	22.4	.....	40	20	− 10	11	36	1.27	.....	0.50	28.0	6	5	19	6	w.	O. B. Tilton.
Flathead Creek	Gallatin	6,000	2	28.2	.....	59	21	− 20	11	42	0.89	.....	0.27	7.3	8	4	5	21	nw.	Alta Williams.
Fort Benton	Chouteau	2,630	32	26.4	− 5.2	56	25	− 17	11	30	0.35	− 0.21	0.12	6.0	4	13[z]	7[z]	3[z]	sw.	Jere Sullivan.
Fort Shaw	Cascade	3,500	23	25.2	− 7.6	56	2	− 25	10	52	0.41	− 0.01	0.12	2.5	5	1	13	16	sw.	U. S. Reclamation Service.
Fort Harrison	Lewis and Clark	4,004	8	27.0	.....	55	19	− 12	10†	38	.....	.....	.....	.....	.....	8	11	11	sw.	Post Hospital.
Foster	Yellowstone		2	25.0	.....	59	4	− 26	12	48	0.50	.....	0.26	4.0	6	11	4	15	n.	E. K. Bowman.
Garneill	Fergus	5,500	3	19.4	.....	43	30	− 32	11	35	1.65	.....	0.50	16.5	6	8	5	17	nw.	Thos. E. Scally.
Glasgow	Valley	2,092	15	16.5	− 8.7	48	3	− 19	11†	37	0.65	+ 0.04	0.40	5.0	4	15	7	8	w.	W. M. Leonard.
Glendive	Dawson	2,069	21	21.7	− 7.7	54	4	− 13	9	34	0.65	+ 0.07	0.20	6.3	6	8	12	10	sw.	E. C. Leonard.
Goldbutte	Chouteau		4	21.2	.....	49	24	− 18	11	34	0.44	.....	0.20	5.4	8	8	9	13	sw.	Joseph Berthelote.
Graham	Custer		6	26.0	.....	59	4	− 21	12	43	0.62	.....	0.13	8.5	10	14	6	10	sw.	J. S. Rue.
Grayling	Gallatin	6,700	6	15.8	.....	43	2	− 35	28	52	1.09	.....	0.22	16.0	13	6	7	17	nw.	P. Kerzenmacher.
Great Falls	Cascade	3,350	20	28.4	− 6.1	55	4†	− 16	11	44	0.89	+ 0.05	0.21	6.6	7	9	14	7	sw.	S. H. Bauman.
Half Way House	Broadwater	6,000	2	.....	.....	.....	.....	.....	.....	.....	1.58	.....	0.35	18.5	8	14	5	11	ne.	Gordon Deans.
Harlowton	Meagher	4,165	4	25.4	.....	54	20	− 30	11	60	0.48	.....	0.35	1.3	6	0	9	21	w.	Joseph Muir.
Havre	Chouteau	2,505	32	21.0	− 9.6	54	3	− 17	10	38	1.19	+ 0.42	0.41	11.1	12	7	9	14	nw.	U. S. Weather Bureau.
Helena	Lewis and Clark	4,110	32	27.4	− 5.3	50	25	− 14	11	42	0.64	− 0.08	0.32	11.0	5	7	9	14	w.	Do.
Highwood	Chouteau		5	.....	.....	.....	.....	.....	.....	.....	1.59	.....	0.90	14.0	7	14	3	13	sw.	W. S. McCord.
Huntley	Yellowstone	3,014	5	27.8	.....	55	4	− 17	11	45	0.57	.....	0.23	5.0	4	7	18	5	w.	U. S. Reclamation Service.
Jones Canyon	Gallatin	6,800	2	.....	.....	.....	.....	.....	.....	.....	2.76	.....	0.32	34.0	15	2	13	15	w.	James McCune.
Jordan	Dawson		...	18.9	.....	48	7	− 27	12	57	0.60	.....	0.40	6.0	3	.....	.....	.....	.....	W. C. Henderson.
Knobles Ranch	Chouteau		...	.....	.....	.....	.....	.....	.....	.....	0.74	.....	0.18	7.0	7	10	10	10	sw.	F. H. Knoble.
Lewistown	Fergus	4,010	15	22.6	− 9.3	56	3†	− 24	10	45	1.32	+ 0.38	0.20	19.2	13	7	15	8	nw.	W. W. Watson.
Lonetree	Chouteau	3,280	6	27.0	.....	57	25	− 20	11	47	0.78	.....	0.45	7.0	6	12	7	11	w.	E. Wilson.
Malta	Valley	2,240	5	18.9	.....	55	3	− 21	11	42	0.38	.....	0.19	4.5	3	17	7	6	nw.	U. S. Reclamation Service.
Medicine Lake	....do		1	16.3	.....	49	6	− 17	23	38	0.18	.....	0.03	1.5	8	20[a]	0[a]	9[a]	sw.	J. S. Collier.
Melstone	Musselshell	2,903	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. J. Parkinson.
Mildred	Custer		2	.....	.....	.....	.....	.....	.....	.....	0.21	.....	0.10	2.2	3	9	15	6	nw.	Leon B. Clark.
Miles City	....do	2,371	20	26.7	− 4.2	58	25	− 20	12	37	0.95	+ 0.35	0.36	7.7	9	11	10	9	w.	U. S. Weather Bureau.
Norris	Madison	4,845	5	30.7	.....	55	14†	− 10	11	31	0.53	.....	0.17	11.8	8	7	3	20	s.	Madison River Power Co.
Nye	Sweet Grass		3	26.7	.....	56	5	− 18	11	60	0.89	.....	0.25	18.3	7	14	8	8	sw.	F. L. Bryant.
Olsen Creek	Jefferson	6,345	3	.....	.....	.....	.....	.....	.....	.....	0.55	.....	0.22	12.6	9	1	14	15	w.	Robert Olsen.
Pipestone Pass	....do	7,000	3	.....	.....	.....	.....	.....	.....	.....	0.87	.....	0.35	18.5	7	7	14	9	w.	Mrs. T. Kiermeyer.
Poplar	Valley	2,020	26	16.1	−10.7	48[a]	5	− 16	12	44[a]	0.35	− 0.38	0.20	6.5	3	23[a]	1[a]	5[a]	w	H. M. Cosler.
Red Lodge	Carbon	5,548	12	23.8	− 8.4	52	20	− 15	11†	46	1.39	+ 0.77	0.27	20.0	9	7	9	14	se.	I. A. Draper.
Renova	Jefferson	4,383	13	30.4	− 5.8	55	18†	− 20	12	52	0.27	− 0.19	0.10	2.0	5	8	5	17	sw.	F B. Elmer.
Ryegate	Musselshell	3,640	2	26.4	.....	60	3†	− 23	12	48	1.23	.....	0.70	6.0	3	22	0	8	w.	H. Scherfenberg.
Seville	Teton	3,980	3	19.1	.....	46	2	− 28	10	41	1.30	.....	0.60	13.0	5	0	20	10	w.	U. S. Reclamation Service.
Shelby	....do	3,276	...	20.2	.....	50	30	− 19	10†	41	T.	.....	T.	0.4	0	14	10	6	nw.	C. D. Kicher.
Sidney	Dawson		1	18.2	.....	51	4	− 12	*17	39	0.80	.....	0.22	12.8	6	18	6	6	nw.	Fred W. Arndt.
Spokane Branch	Lewis and Clark		1	.....	.....	.....	.....	.....	.....	.....	0.21	.....	0.13	7.0	2	3	23	4	.....	O. E. Penwell.
Springbrook	Dawson		10	20.2	−11.1	48	4	− 23	10	43	1.71	− 0.95	0.47	15.4	9	8	7	15	nw.	Mrs. H. L. Miller.
Stearns	Lewis and Clark	4,500	2	.....	.....	.....	.....	.....	.....	.....	1.23	.....	0.29	16.3	11	10	9	11	sw.	J. W. Hardgrove.
Sunlit Farm	Chouteau		...	16.4	.....	51	3	− 23	10	42	0.10	.....	0.06	5.0	3	11	7	12	nw.	C. R. Noyes.
Sun River Canyon	Teton	4,650	...	24.9	.....	47	25	− 27	11	46	0.70	.....	0.29	28.0	5	2	13	15	nw.	U. S. Reclamation Service.
Three Forks	Gallatin	4,066	1	.....	.....	.....	.....	−29[m]	12	....	0.30	.....	.....	5.0	4	5[m]	8[m]	4[m]	sw.	M. S. Carpenter.
Tokna	Dawson	2,050	6	20.9	.....	52	6	− 21	10	40	0.94	.....	0.40	9.0	5	15	8	7	s.	U. S. Reclamation Service.
Trail Creek	Park	6,000	3	.....	.....	.....	.....	.....	.....	.....	1.28	.....	0.30	27.0	10	18	4	8	w.	A. Weidenbauer.
Utica	Fergus	5,000	17	26.7	− 6.8	56	22	− 27	11	52	0.62	− 0.28	0.30	9.0	4	22	4	4	w.	P. W. Korell.
Valentine	....do		5	21.2	.....	56	3	− 25	11	49	0.43	.....	0.19	2.1	5	13	5	12	w.	B. M. Bean.
Valier	Teton		...	22.4	.....	50	2†	− 22	11	44	0.34	.....	0.17	10.2	6	8	17	5	nw.	H. J. Saunders.
Virginia City	Madison	5,880	23	26.8	− 3.2	49	20	− 14	11	34	1.33	+ 0.38	0.40	13.3	6	10	13	7	w.	M. Mailand.
Wall Rock Mountain	Broadwater	5,600	2	.....	.....	.....	.....	.....	.....	.....	1.01	.....	0.28	13.0	12	6	17	7	nw.	D. L. Doig.
Warm Springs Creek	Madison	7,500	2	.....	.....	.....	.....	.....	.....	.....	1.07	.....	0.28	10.8	12	6	3	21	w.	M. D. Lytle.
Wheaton	Musselshell		...	25.8	.....	56[b]	26	− 25[b]	11	45[b]	0.65	.....	0.30	6.5	4	17[b]	6[b]	5[b]	w.	Irvin Story.
White Sulphur Springs	Meagher		...	25.2	.....	50	20	− 22	11	47	0.50	.....	0.17	4.3	4	6	15	9	.....	P. R. Wild.
Wilder	Fergus		...	23.0	.....	59	3	− 22	11	46	0.63	.....	0.20	6.0	5	11	5	14	w.	J. Rogers.
Wolf Creek	Lewis and Clark	4,000	8	31.0	.....	57	2†	− 22	11	49	0.46	.....	0.12	.....	6	0	25	5	se.	A. J. Reed.
Woodville	Jefferson	6,376	2	.....	.....	.....	.....	.....	.....	.....	0.84	.....	0.19	10.0	10	6	19	5	sw.	Anna Kinman.
North Dakota.																				
Aplin	Oliver		5	19.0	.....	55	4	− 17	23	39	0.33	.....	0.15	7.5	7	16	9	5	ne.	J. B. Hagelbarger.
Ashley	McIntosh	2,001	17	16.1[a]	− 9.7	40[a]	25	− 9[a]	28	36[a]	0.62	+ 0.02	0.28	6.2	6	.....	.....	.....	.....	F. F. Zimmerman.
Beach	Billings	2,576	5	18.4	.....	50	4	− 18	10	42	0.63	.....	0.35	7.5	6	18	8	4	nw.	D. J. Steiner.
Belfield	Stark	2,583	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. F. Goblus.
Berthold Agency	McLean	2,082	15	17.2	−10.9	57	4	− 15	17	45	0.48	− 0.13	0.20	6.2	6	18	5	7	n.	C. L. Hall.
Bismarck	Burleigh	1,674	38	18.5	− 7.5	58	4	− 11	12	40	0.78	+ 0.10	0.48	10.1	10	11	6	13	nw.	U. S. Weather Bureau.
Broncho	Mercer		4	20.0	.....	43	27	− 12	11	32	0.50	.....	0.48	5.0	2	0	25	5	nw.	E. M. Walker.
Buford	Williams	1,944	6	18.4	.....	50	4	− 15	10	38	0.55	.....	0.20	5.5	5	6	10	14	w.	J. A. Beisel.
Dickinson	Stark	2,543	19	18.7	− 8.3	52	4	− 13	12	43	0.56	− 0.03	0.08	7.4	10	8	15	7	nw.	L. R. Waldron.

TABLE 1.—*Climatological data for November, 1911. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Dakota—Con.																				
Edgeley	Lamoure	1,468	10	18.0	−12.9	55	4	− 11	12	43	0.20	− 0.26	0.20	2.0	1	4	8	18	nw.	O. A. Thompson.
Epping	Williams		4								0.41		0.10	7.0	6	15	5	10	n.	M. E. Uggen.
Flasher	Morton																			W. R. Shortridge.
Fullerton	Dickey	1,439	13	16.5	−12.5	51	4	− 10	12	39	0.98	+ 0.38	0.40	9.8	5	8	5	17	nw.	F. O. Alin.
Garrison	McLean	1,901	2	16.4		52	4	− 13	10†	43	0.60		0.20	5.4	7	6	15	9	nw.	G. L. Robinson.
Haley	Bowman		4	19.8		55	4	− 19	1	54	0.41		0.11	8.0	5	16	5	9	nw.	A. O. Lawrence.
Hettinger	Adams	2,253	5	19.9		55	4	− 15	1	45	0.40		0.25	6.0	2	11	14	5	nw.	W. R. Lanxon.
Howard	Williams	2,275	5	13.6		48	4	− 19	10	37	0.95		0.25	9.5	5	11	11	8		C. P. Amsbaugh.
Jamestown	Stutsman	1,390	24	17.6	− 8.4	57	4	− 13	11†	40	0.99	+ 0.18	0.25	7.2	10	12	1	17	nw.	Thos. Pettigrew.
Lamoine	Kidder		4																	E. V. Virgin.
McHenry	Foster	1,509	2	15.2		52	4	− 18	15	35	0.28		0.10	2.8	5	11	11	8	nw.	John Knox.
Marmarth	Billings		4								0.22		0.08	7.0	5	18	5	7	w.	S. P. Grane.
Marstonmoor	Stutsman		4			48[a]	4	− 16	17	43[a]	1.00		0.60	10.0	3	12	6	12	nw.	H. H. McCumber.
Medora	Billings	2,225	15	19.6	− 9.4	54	17	− 18	1	64	1.16	+ 0.78	0.50	11.6	5	11	4	15	ne.	J. W. Hesser.
Melville	Foster	1,590	14	17.4[b]	−10.9	57[b]	4	− 15[b]	15	39[b]	0.51	+ 0.22	0.30	3.0	2				nw.	J. P. Kidder.
Mott	Hettinger		5	19.2		52	6	− 14	1†	41	1.62		0.27	14.0	11	13	6	11	w.	O. H. Opland.
Napoleon	Logan	1,955	20	16.0	− 9.3	57	4	− 15	12	43	0.56	− 0.26	0.18	6.0	4	13	3	14	sw.	C. J. Hoof.
New England	Hettinger	2,400	16																	J. L. McGovern.
New Rockford	Eddy	1,531	2																	J. V. M. Sundberg.
New Salem	Morton	2,163	5	17.6		55	4	− 13	10†	34	1.51		0.50	15.0	11	11	6	13	nw.	J. Christiansen.
Orange	Adams		5																	J. E. Goforth.
Schafer	McKenzie		3																	Lundin Bros.
Steele	Kidder	1,857	16																	B. C. Smith.
Washburn	McLean	1,731	8	18.6		52[b]	4	− 11[b]	10†	40[b]	0.23		0.13	2.3	2				w.	W. R. Peterson.
Williston	Williams	1,875	32	17.0	− 8.2	50	4	− 14	10	35	1.25	+ 0.65	0.76	12.1	13	6	13	11	w.	U. S. Weather Bureau.
South Dakota.																				
Aberdeen	Brown	1,300	21	18.4	−10.1	55	5	− 10	12	43	1.72	+ 0.84	1.00	17.0	6	12	6	12	nw.	D. G. Gallett.
Academy	Charles Mix		12	27.4	− 9.2	55	4†	− 9	12	40	0.34	− 0.13	0.08	3.2	7	15	6	9	nw.	I. T. Lothrop.
Alexandria	Hanson	1,352	22																	Albert Hill.
Ardmore	Fall River	3,557	2																	C., B. & Q. R. R. Co.
Armour	Douglas	1,521	15	24.4[k]	− 9.9	54[k]	27†	− 6[k]	12	48[k]										T. J. Markey.
Bellefourche	Butte	3,000	3	26.5		56	4†	− 7	11†	44	1.14		0.50	7.5	6	6	14	10	nw.	U. S. Reclamation Service.
Brookings	Brookings	1,636	22	22.0	− 7.7	49	6	− 12	28	36	0.24	− 0.33	0.08	2.2	5	9	12	9	nw.	Experiment Station.
Bryant	Hamlin	1,846														18	0	12	nw.	J. W. Ault.
Camp Crook	Harding	3,000	19	24.0	− 7.1	60	5	− 13	12	43	0.43	− 0.03	0.20	3.6	4	16	9	5	nw.	U. S. Forest Service.
Canton	Lincoln	1,248	16	25.6	− 8.4	53	7	− 6	12	44	T.	− 1.03	T.	T.	0	15	5	10	se.	John H. Holsey.
Cascade Springs	Fall River	3,422	3	28.7		56	8†	− 6	12	36	0.33		0.12	2.2	4	16	5	9	nw.	Fred Noerenberg.
Castlewood	Hamlin	1,685	5	20.9		50	4	− 9	12	40	0.34		0.10	3.4	10	11	2	17	nw.	M. N. Bradley.
Centerville	Turner	1,229	14	27.3	− 8.2	53	9	− 4	12	46	0.25	− 0.53	0.15	2.2	6	4	14	12		Frank Williams.
Chamberlain	Brule	1,363	14	26.7[f]	− 8.0	60[f]	3	− 5[f]	11	56[f]									nw.	W. B. Van Horn.
Clark	Clark	1,779	17	19.8	−10.5	52	4	− 12	12	42	1.54	+ 0.78	0.60	14.0	11	11	9	10	nw.	O. H. LaCraft.
Cottonwood	Stanley	2,414	3	28.2		57	4	− 5	12	40	0.72		0.25	2.2	6	10	13	7	nw.	Experiment Station.
Custer	Custer	5,316									1.40		0.40	14.0	4	17	12	1	w.	R. P. Imes.
Daviston	Perkins		2																	G. G. Davis.
Deadwood	Lawrence	4,535	2	25.6		54	4†	− 13	11	41	3.82		0.95	37.0	9	16	4	10		R. E. Grimshaw.
Deerfield	Pennington	6,000	2								1.40		0.33	25.6	12	15	7	8	w.	Frank E. Miller.
De Smet	Kingsbury	1,726	18	23.4	− 7.1	52[a]	4	− 8[a]	12	41						19	3	8	nw.	J. O. Purinton.
Dowling	Stanley	2,250	2	26.9		57	4†	− 8	12	35	1.37		0.80	11.5	7	13	8	9	nw.	M. P. Dowling.
Dumont	Lawrence	6,195	2								3.88		0.92	32.0	8	14	8	8	nw.	A. B. Wood.
Eagle Butte	Dewey	2,415		22.4		58	4	− 9	12	44	0.67		0.20	8.5	6	17	8	5		Dr. John F. Chandler.
Eales	Potter										1.10		0.26	10.2	13	14	8	8	nw.	A. H. Peterson.
Edson	Meade																			J. C. Stoner.
Elk Mountain	Custer	4,700	2								0.73		0.36	8.0	5	13	7	10	nw.	James E. Blaine.
Englewood	Lawrence	5,723	2								4.10		0.80	41.0	10	1	23	6	n.	T. J. Cummings.
Eureka	McPherson	1,884	2	19.2		59	4	− 14	12	40	0.88		0.30	8.5	6	13	10	7	w.	Experiment Station.
Fairfax	Gregory		7	29.0		59	4	− 5	12	45	0.16		0.11	1.8	2	23	3	4	nw.	U. G. Stevenson.
Faulkton	Faulk	1,595	16	21.0	− 8.6	57	4	− 9	12	42	0.40	− 0.10	0.28	4.0	3	19	4	7	w.	Miss Belle Talcott.
Flandreau	Moody	1,565	21	23.9	− 6.6	48	7†	− 9	12	40	0.20	− 0.67	0.08	2.0	4	9	5	16	n.	W. A. Harris.
Forestburg	Sanborn	1,231	19	25.5	− 5.5	56	4†	− 6	12	50	0.64	+ 0.04	0.17	6.4	6	17	6	7	nw.	S. S. Judy.
Frederick	Brown	1,371	3	17.5		53[a]	4	− 10[a]	12	51[a]	4.49		1.50	14.0	5	15	8	7	nw.	J. E. Jeffers.
Gannvalley	Buffalo		13																	A. L. Hanson.
Greenmont	Lawrence	6,430	2								3.91		1.10	42.0	9	11	10	9	nw.	H. C. Hoffbuhr.
Greenwood	Charles Mix		19	30.7	− 6.0	58	4†	− 2	12	42	0.27	− 0.42	0.07	2.7	5	11	11	8	nw.	T. C. Williamson.
Hardingrove	Stanley			25.0		60	4	− 20[a]	12	40[a]	0.17		0.10	1.7	3	12	10	8	nw.	Mrs. Laura Sinclair.
Hardy Ranger Station	Lawrence	6,600	2																	Mrs. Ennis A. Gundlach.
Harveys Ranch	do	6,282	1								2.50		0.83	36.7	8	18	5	7	nw.	Jerome Harvey.
Hermosa	Custer	3,278	5	20.6		59	21†	− 14	11	47	0.47		0.11	5.8	6	17	7	6	nw.	S. M. Booth.
Highmore	Hyde	1,800	15	21.8	−11.4	58	4	− 13	12	43	0.35	− 0.15	0.15	3.1	6	16	4	10	nw.	Experiment Station.
Hopewell	Stanley		1	25.4		60	4	− 7	12	36	0.85		0.40	8.5	4	15	5	10	w.	E. R. Myers.
Howard	Miner	1,564	19	22.8[d]	− 8.4	49[d]	4†	− 11[d]	12	45[d]	0.14	− 0.54	0.04	1.2	4	11	12	7	nw.	J. J. Cox.
Howell	Hand		9	21.8		60	4	− 12	12	50	0.30		0.10	3.6	8	17	8	5	nw.	M. A. Shuster, jr.
Huron	Beadle	1,306	29	23.0	− 4.4	52	30	− 6	12	44	0.26	− 0.32	0.06	2.2	10	12	7	11	nw.	U. S. Weather Bureau.
Ipswich	Edmunds	1,530	14	19.7	− 9.6	59[d]	4	− 11[d]	11	59[d]	1.40	+ 1.02	0.60	14.0	3				nw.	J. B. Taylor.
Kadoka	Stanley	2,467	2	27.0		59[b]	21	− 6[b]	12	40[b]	0.18		0.13	1.8	2	8	8	14	nw.	Rev. D. S. Brown.
Kennebec	Lyman	1,689	18	25.9	− 6.5	60[a]	4	− 6[a]	12	50[a]	0.65	+ 0.24	0.30	6.5	5	18	3	9	nw.	R. C. Van Horn.
Kidder	Marshall	1,295	7	18.3		60	4	− 18	29	51	1.81		0.70	15.5	7	17	0	13	sw.	H. C. Schussler.
Kimball	Brule	1,788	22	25.2	− 6.9	54	4	− 6	12	34	0.21	− 0.34	0.08	2.0	5	18	5	7	nw.	G. D. Rose.
Lacreek	Bennett	2,700		26.6		60	21†	− 6	1†	39	1.52		0.65		7	11	13	6	nw.	Walter E. Baker.
La Delle	Spink	1,400	14	22.8	− 8.4	48	5	− 9	13	40	0.50	− 0.22	0.15	6.0	6	14	2	14	nw.	E. L. Ebbert.
Lead	Lawrence	5,200	2	26.4		51	25	− 19	11	43	2.67		0.74	31.2	12	13	8	9		E. F. Irwin.
Lemmon	Perkins	2,345	2	21.2		58	5	− 12	11	42	1.18		0.30	9.0	10	12	13	5	nw.	O. C. Olsen.
Manderson	Shannon		6	29.5		57	4†	− 14	12	37	0.33		0.14	1.9	6	13	6	11	n.	W. A. Spencer.
Marion	Turner	1,447	10	27.6	− 7.9	53	7	− 5	12	41	0.34	− 0.67	0.17	1.7	3	9	11	10	nw.	M. H. Dains.
Marston	Sully		3	21.6		59	4	− 11	12	45	0.55		0.25	6.0	3	16	6	8	nw.	John S. Walker.
Mellette	Spink	1,300	16	21.0	− 9.5	55[a]	4	− 2[a]	12	41[a]	1.13	+ 0.61	0.44	9.5	8	19	2	9	nw.	Frank A. Howe.
Menno	Hutchinson	1,325	14	27.8	− 6.5	58	5	− 5	12	45	0.27	− 0.55	0.09	2.5	5	15	3	12	nw.	J. H. Swanton.
Milbank	Grant	1,148	20	18.7	−11.5	50	4†	− 6	12†	39	1.28	+ 0.57	0.90	9.0	8	11	2	17	nw.	I. T. Patridge.
Mitchell	Davison	1,312	17	26.0	− 7.0	55	30	− 5	12	43	0.06	− 0.59	0.04	1.5	2	8	17	5	nw.	C. W. Downey.
Mobridge	Walworth			18.9		51	5	− 6	11	36	0.95		0.40	9.5	3	12	8	10	nw.	Thomas J. Morris.
Murdo	Lyman	2,300	3	24.8		61	4	− 10	2	48	0.90		0.60	9.0	3	19	6	5	nw.	L. C. Bode.
Oelrichs	Fall River	3,339	19	26.4[f]	− 7.5	55	7	− 8	12	39	0.55	− 0.13	0.35	2.0	3	11	12	7		J. E. Strouse.
Onaka	Faulk	1,600									0.89		0.30	8.0	9	15	7	8	nw.	H. P. Camp
Orman	Butte	2,920	5	26.8		57	4	− 6	11†	42	0.95		0.35	7.2	6	14	6	10	nw	U. S. Reclamation Service.
Ottumwa	Stanley		3	24.2		57[b]	4	− 10[b]	11	47[b]	1.10		0.60	11.0	4	14	7	9	nw.	J. W. Bretz.

TABLE 1.—*Climatological data for November, 1911. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
South Dakota—Con.																				
Parkston	Hutchinson	1,400									0.79		0.29	8.5	5	21	5	4		W. C. Kempfer.
Pierre	Hughes	1,572	19	26.4	− 5.2	60	4	− 3	12	39	0.47	+ 0.04	0.26	7.1	5	11	10	9	nw.	U. S. Weather Bureau.
Plankinton	Aurora	1,528	17								0.65	+ 0.15	0.34	5.5	4	13	9	8	sw.	W. G. Andrews.
Pollock	Campbell		5	17.2		60	3	− 16	13	56	0.86		0.20		9	15	6	9	nw.	J. H. Jones.
Rapid City	Pennington	3,251	23	28.2	− 5.4	58	25	− 8	12	41	1.40	+ 0.94	0.43	11.8	9	9	13	8	nw.	U. S. Weather Bureau.
Redfield	Spink	1,295	13	19.9	−11.4	50	7	− 9	12	44	0.39	− 0.03	0.25	7.0	3	15	1	14	nw.	A. S. Hall
Rochford	Pennington	5,228	1								1.78		0.40	27.5	12	10	13	7	nw.	Mrs. M. E. Deffenbaugh.
Rosebud	Todd	2,600	17	27.8	− 7.1	59[a]	21	− 7[a]	12	40[b]	1.15	+ 0.49	0.30	11.5	9	11	16	3	nw.	W. M. Ege.
Rosebud Agency	do	2,600																		C. W. Soldier.
Roslyn	Day		5	17.6		52	4	− 11	13	39	1.05		0.40	10.5	6	14	4	12	nw.	O. O. Floren.
Selby	Walworth		3	18.4[c]		51[c]	4	− 16[c]	12	34[c]	0.99		0.54	8.0	6	17	6	7	nw.	Miss Gertrude Hall.
Sioux Falls	Minnehaha	1,400	20	25.0	− 7.0	50	7	− 6	12	39	1.43	+ 0.62	1.00	6.5	7	10	7	13	nw.	J. H. Bechtold.
Sorum	Perkins			23.4		58	4	− 12	1	45	0.42		0.15	4.0	5	10	13	7	w.	M. S. Eberhart.
Spearfish	Lawrence	3,647	21	27.7	− 8.9	53	8†	− 9	11	38	2.65	+ 2.10	0.80	23.0	8	12	10	8	sw.	A. E. Johnson.
Stephan	Hyde	1,840	7	24.6		62	4	− 8	12	48	0.54		0.25	3.5	6	13	4	13	nw.	Rev. A. Mattingly.
Tama	Meade		2	24.6		62	4	− 12	11	39	0.74		0.35	7.0					nw.	J. J. Daly.
Timber Lake	Dewey	2,163		20.7		58	4	− 10	12	38	0.84		0.26	11.0	8	18	6	6	nw.	R. T. Halihan.
Tyndall	Bonhomme	1,418	14	28.4	− 5.9	56	25	− 3	12	44	0.42	− 0.26	0.34	8.0	3	18	4	8	nw.	F. F. Chladek.
Vale	Butte	2,765	3	29.1		58	4†	− 8	12	48	1.08		0.51	5.5	5	11	5	14	nw.	U. S. Reclamation Service.
Vermilion	Clay	1,222	10	30.4	− 7.1	54	25	− 3	12	43	0.02	− 1.07	0.02	0.2	1	15	4	11	nw.	Prof. E. C. Perisho.
Waters Ranch	Lawrence	4,000	1								2.06		0.63	27.2	10	14	4	12	w.	George Waters.
Watertown	Codington	1,735	17	18.6	− 9.9	53	4	− 9	12	41	0.96	+ 0.33	0.70	7.0	6	5	8	17	nw.	Robert Q. Wood.
Wentworth	Lake		18	23.5	− 6.1	48	7	− 8	12	38	0.22	− 0.45	0.09	0.7	4	15	6	9	nw.	R. C. Zimmerman.
Wessington Springs	Jerauld	1,410	11																	Mrs. N. J. Dunham.
White Lake	Aurora	1,646	2								T.		T.	T.	0	4	14	12	w.	Mrs. G. A. Rogers.
Yankton	Yankton	1,234	37	27.7	− 5.8	55	25	− 3	12	39	0.32	− 0.47	0.09	3.5	6	12	6	12	nw.	U. S. Weather Bureau.
Minnesota.																				
Pipestone	Pipestone	1,710	11	19.0	−13.5	46	5†	− 8	12	35	T.	− 0.88	T.	T.	0	8	3	19	nw.	A. L. Doan.
Colorado.																				
Akron	Washington	4,650	9								0.20		0.10	3.0	4					Ira M. Barnhouse.
Albion Lake	Boulder	10,500	1																	Fred R. Dugan.
Arriba (near)	Lincoln	5,243	5	33.8		65	10	− 5	12	48	0.20		0.13	2.5	4	22	3	5	nw.	C. A. Creel.
Auldhurst	Teller	8,500	1								0.52		0.10	8.8	7	15	12	3	s.	Mrs. Alice A. Auld.
Bennett (near)	Arapahoe	5,484	3																	J. F. Engelhoff.
Boulder	Boulder	5,347	15	37.4	− 5.5	68	15	− 2	11†	57	0.72	− 0.02	0.30	10.0	6	20	5	5	w.	Otto H. Waugelin.
Burlington	Kit Carson	4,160	8	35.6		64	10†	− 7	12	57	0.20		0.08	3.0	3	12	13	5	nw.	W. P. Davis.
Cassells	Park	8,445	1								0.45		0.15	6.8	6	16	7	7	e.	Mrs. Harriett M. Cassell.
Castle Rock	Douglas	6,220	19	32.4	− 3.7	68[b]	15	− 12[b]	28	46[b]	0.53	− 0.05	0.23	9.5	4	18[b]	2[b]	8[b]	n.	Thos. P. Vaughan.
Cheesman	Jefferson	6,890	8	35.4		64	20	− 9	28	50	0.81		0.25	10.0	5	8	22	0	n.	J. G. Thornburg.
Cheyenne Wells	Cheyenne	4,279	17	34.7	− 5.0	63	21	− 7	12	50	0.25	− 0.28	0.25	2.0	1	26	1	3	n.	J. W. Adams.
Cope	Washington		14	32.4	− 6.4	69	26	− 19	12	58	0.59	− 0.15	0.31	6.4	4	14	9	7	nw.	A. A. Williams.
Corona	Grand	11,660	4	10.3		30	20	− 16	12†	37	5.55		0.58		16				w.	U. S. Weather Bureau.
Denver	Denver	5,272	39	36.4	− 2.8	66	10	− 2	11	43	0.37	− 0.15	0.20	4.7	5	18	7	5	s.	Do.
Edgewater	Jefferson	5,450	3	35.5		67	10	− 12	12	52	0.23		0.15	4.0	3	22	6	2		Dr. N. P. Levin.
Estes Park Fish Hatchery	Larimer	8,000	2								1.23		0.36	27.0	7	0	10	20	w.	G. H. Thomson.
Fort Collins	do	4,985	29	32.2	− 3.2	67	25	− 11	12	53	0.43	0.00	0.22	5.5	6	17	11	2	nw.	Colorado Agricultural College.
Fort Lupton	Weld	4,907	1																	R. W. Benedict.
Fort Morgan	Morgan	4,319	13	33.0	− 3.4	69	10	− 20	12	67	0.05	− 0.32	0.05	1.0	1	15	8	7	nw.	Miss Della M. Scott.
Frances	Boulder	9,300	6	25.1		54	20	− 8	12	38	3.07		0.50	47.5	13	10	12	8	w.	C. W. Barry.
Frys Ranch	Larimer	7,500	1	30.2		57	20	− 2	2	43	0.53		0.24	7.5	6	16	8	6	w.	Norman W. Fry.
Georgetown	Clear Creek	8,550	9								0.60		0.20	9.3	8	8	11	11		H. L. Corbett.
Greeley	Weld	4,649	20	33.4	− 5.1	65	10†	− 18	12	54	0.37	− 0.16	0.32	4.5	2	19	8	3	nw.	Nelson Reynolds.
Grover	do	5,076																		D. M. Porter.
Hartsel	Park	8,892	2																	Emily Kleinknecht.
Hawthorne	Boulder	6,000	2								1.11		0.25	16.5	6	22	5	3		B. E. Chesebro.
Holyoke (near)	Phillips	3,745	15								T.	− 0.39	T.	T.	0	17	3	10	nw.	A. C. Cauble.
Idaho Springs	Clear Creek	7,543	11	31.4	− 4.7	60	20	− 1	28	37	0.52	− 0.01	0.20	6.0	7	4	16	10	w.	J. J. Willis.
Keota	Weld	4,966									0.23		0.20	3.5	2	23	3	4	n.	I. S. Griffin.
Laporte	Larimer	5,053	20								0.41	− 0.07	0.15	8.2	5					P. A. Taft.
Leroy (near)	Logan	4,380	22																	Chas. Green.
Longmont	Boulder	4,950	10	33.0	0.0	66	9†	− 7	11	56	0.39	− 0.01	0.31	7.0	3	24	3	3	w.	Great Western Sugar Co.
Longs Peak (near)	Larimer	8,600	16	26.4	− 5.2	53	20	− 7	12	45	2.07	+ 0.40	0.83	30.0	10	16	6	8	n.	Enos. A. Mills.
Lulu Pass	do		1																	A. M. McCahan.
Moraine Park	do	7,775	21	30.2[d]	− 3.5	49[d]	21	− 4[d]	23	43[d]	0.90	+ 0.25	0.50	12.0	4	14[d]	0[d]	12[d]	w.	J. D. Stead.
Platte Canon	Jefferson	5,492	12								0.07	− 0.35	0.03	6.5	3	21	6	3	nw.	Denver Union Water Co.
Saint Cloud	Larimer	7,750	8								0.50		0.15	10.0	5	9	14	7	nw.	Miss Guilla Sivers.
Sedgwick	Sedgwick	3,539	3	33.4		67	21	− 7	12	52	0.05		0.03	1.0	2	14	14	2	nw.	Edwin Lewis, M. D.
Sill Mine	Clear Creek	11,500	2	14.6		39	20	− 17	28	39	2.74		0.75	28.7	13	16	3	11	nw.	Chas. F. Deininger.
Spicer (near)	Jackson	8,700	1								1.17		0.23	16.0	7	12	7	11	sw.	Frank W. Murphy.
Sterling	Logan	3,892	2	34.6		69	10	− 13	12	55	0.05		0.05	0.4	1	17	5	8	se.	Great Western Sugar Co.
Waterdale	Larimer	5,206	8					− 10	11		0.69		0.26	12.5	5					P. H. Boothroyd.
Wray	Yuma	3,512	15	35.1	− 3.8	67	10	− 3	12	53	0.23	− 0.22	0.13	1.0	2	15	7	8	nw.	J. C. Tuomey.
Yuma	do	4,138	20								0.06	− 0.40	0.06	T.	1	12	13	5	nw.	Matthew Harr.
Nebraska.																				
Ainsworth	Brown	2,521	7	27.8		55	21	− 7	12	41	0.19		0.09	1.3	5	5	19	6	sw.	John M. Cotton.
Albion	Boone	1,747	12	26.0	− 8.2	58	9	− 3	12	45[d]	0.66	− 0.04	0.52	1.4	3				nw.	F. M. Weitzel.
Alliance	Boxbutte	3,968	18	30.2	− 3.9	61	21	− 9	12	44	0.10	− 0.27	0.05	1.0	2	15	12	3	nw.	J. A. Keegan.
Alma	Harlan	1,939	13	35.8	− 4.0	64	6†	− 4	12	45	0.16	− 0.64	0.09	0.7	2	19	7	4	n.	W. A. Sharpnack.
Arcadia	Valley	2,186	14								0.10	− 0.37	0.10	1.0	1	4	20	6	nw.	J. L. Owen.
Arden	Wheeler		1								0.02		0.02	T.	1	10	15	5	nw.	A. E. Johns.
Ashland	Saunders	1,100	28	33.0	− 5.8	62	9	1	12	40	0.16	− 0.80	0.04	0.2	7	20	6	4	nw.	Dr. A. S. von Mansfelde.
Ashton	Sherman	2,061	18								0.09	− 0.47	0.07		2	17	4	9	nw.	F. Rein.
Atkinson	Holt	2,108	6	28.0		59	4	− 4	12	52	0.20		0.20	2.0	1	15	4	11	nw.	C. J. Wilson.
Auburn	Nemaha	1,051	19	36.3	− 4.3	62	9†	3	12	40	0.55	− 0.84	0.39	T.	3	21	0	9	nw.	J. R. Huffman.
Aurora	Hamilton	1,792	19	32.0	− 6.0	62	9	− 1	12	44	0.27	− 0.64	0.12	1.5	3					C., B. & Q. R. R. Co.
Beatrice	Gage	1,235	21	34.8	− 4.4	59	6	2	12	35	0.60	− 0.49	0.28	0.5	4	20	4	6	nw.	W. S. Waxham.
Beaver City	Furnas	2,147	20	36.0	− 4.0	62	9	0	12	41	0.16	− 0.52	0.07	T.	3	14	10	6	nw.	T. M. Davis.
Bellevue	Sarpy	1,210	29	33.7		60	9†	0	12	39	0.58	− 0.75	0.29	3.7	5	14	6	10	nw.	A. A. Tyler.
Benkelman	Dundy	2,968	15								0.04	− 0.39	0.04	0.5	1	6	20	4	se.	R. D. Druliner.

TABLE 1.—*Climatological data for November, 1911. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Nebraska—Continued.																				
Bertrand	Phelps	2,515	4								0.10		0.10	1.0	1	17	8	5	nw.	W. F. Dobbin.
Blair	Washington	1,122	16	31.0	− 7.5	60	9	− 1	12	40	0.20	− 1.14	0.14	2.2	5	17	6	7	nw.	D. C. Van Deusen.
Bloomfield	Knox		5	27.8		55	25	− 5	12	44	0.56		0.30	5.5	5	10	13	7	nw.	Dr. L. C. Bleick.
Bradshaw	York	1,715	14								0.22	− 0.90	0.20	T.	2	16	11	3		E. C. Roggy.
Bridgeport	Morrill	3,658	15	32.1	− 4.6	64	21	− 10	12	51	0.10	− 0.28	0.10	1.0	1	17	9	4	nw.	R. H. Willis.
Broken Bow	Custer	2,477	17	31.0	− 5.1	60	25	− 3	12	58	T.	− 0.49	T.	T.	0	19	2	9	nw.	C., B. & Q. R. R. Co.
Bruning	Thayer	1,583	1								0.28		0.14	1.0	3	23	2	5	nw.	Henry Middendorf.
Burge	Cherry	2,674	5	28.6		60	21	− 9	12	40	T.		T.	T.	0	10	7	13	nw.	H. A. Davis.
Butte	Boyd		5	30.1		58	8	− 4	12	44a	0.08		0.08	1.0	1				nw.	W. Whitla.
Cairo	Hall	1,951																		Elliott Harrison.
Callaway	Custer	2,555	19	35.3	− 1.9	64	25	− 4	12	51	0.05	− 0.51	0.05	0.5	1	18	8	4	nw.	J. H. Evans.
Cambridge	Furnas	2,258	5	36.1a		64	9	− 2	12	45a	0.10		0.10	1.0	1				nw.	Chas. Jensen.
Canton (near)	Sioux		2								0.45		0.30	6.0	2					A. E. Hann.
Columbus	Platte	1,442	19	31.0	− 5.8	59	25	− 1	12	37	0.20	− 0.53	0.20	T.	1	18	1	11	nw.	A. L. Rush.
Cozad	Dawson	2,496	4								T.		T.	T.	0				nw.	A. A. Luttin.
Creighton	Knox	1,600																		C. L. Cherry.
Crete	Saline	1,368	28	33.4	− 5.1	60	9	− 7	12	37	0.07	− 0.82	0.05	0.5	2	15	4	11	n.	Doane College.
Culbertson	Hitchcock	2,565	25	30.7i		62	15	− 5	12	50i	T.	− 0.46	T.	T.	0				nw.	J. H. Corrick.
Curtis	Frontier	2,553																		Dr. S. R. Razee.
David City	Butler	1,619	22	32.8	− 3.0	58	9	− 1	12	40	0.18	− 0.76	0.09	0.2	3	15	4	11	nw.	S. Clingman.
Dawson	Richardson	945																		Mrs. E. I. Atkinson.
Du Bois	Pawnee	1,074	7								0.67		0.30		8	13	7	10	nw.	O. M. Backus.
Dumas	Garfield																			J. M. Kenney.
Ellis	Gage	1,430																		D. J. Wood.
Elm Creek	Buffalo	2,268	4								T.		T.	T.	0					E. L. Sutton.
Elsie	Perkins	3,382	4								0.07		0.04	0.6	3					J. F. Brittain.
Ericson	Wheeler	2,029	20								0.08	− 0.35	0.05	0.7	3				nw.	J. A. Bodyfield.
Ewing	Holt	1,888	21	28.2		59	7†	− 4	12	49	0.50	+ 0.03	0.30	5.0	2					G. H. Benson.
Fairbury	Jefferson	1,316	35								0.43	− 0.53	0.37	T.	3	15	10	5	nw.	W. F. Cramb.
Fairmont	Fillmore	1,641	19	30.8	− 6.6	63	26	− 2	12	42	0.22	− 0.62	0.15	0.8	2	16	0	14	n.	C., B. & Q. R. R. Co.
Fort Robinson	Dawes	3,764	29	24.0	−11.0	52	6	− 14	12	60	0.18	− 0.21	0.10		4	17	7	6	w.	Post Surgeon.
Franklin	Franklin	1,820	21	34.5	− 3.9	67	26	0	12	46	0.15	− 0.53	0.15	T.	1	18	6	6	nw.	A. R. Peck.
Fremont	Dodge	1,203	31	31.4	− 5.1	60	9	0	12	46	0.15	− 0.90	0.10	1.0	2	9	16	5	se.	Ernest Hahn.
Fullerton	Nance	1,629	11	30.6		61	9	− 2	12	41b	0.55	− 0.50	0.51	0.5	2				nw.	Dr. F. W. Johnson
Geneva	Fillmore	1,633	22	33.8	− 4.5	62	26	0	12	40	0.08	− 0.85	0.05	0.8	2	15	9	6	sw.	F. M. Flory.
Genoa	Nance	1,584	36	32.0	− 3.3	60	25	− 1	12	43	0.21	− 0.55	0.15	0.5	3	16	9	5	nw.	F. W. Parsons.
Gordon	Sheridan	3,550	8	25.5f		60	21	− 14	12	39f	0.47		0.40		2				nw.	G. F. Williams.
Gosper	Gosper		10								0.08	− 0.46	0.05	1.5	3	16	8	6	nw.	E. H. Stoll.
Gothenburg	Dawson	2,557	18	33.8	− 4.2	63	9	− 5	11	51	T.	− 0.71	T.	T.	0	18	3	9	nw.	Dr. W. J. Bartholomew.
Grand Island	Hall	1,860	20	33.0	− 4.3	63	9	1	12	40	0.02	− 0.72	0.02	0.2	1	15	3	12	n.	E. A. Barnes.
Grant	Perkins	3,405	6	33.1		65	4	− 5	12	49	0.20		0.10	1.5	3	12	12	6	nw.	Cyrus Carver.
Greeley	Greeley	2,021	16	31.6		57	25	− 3	12	42	0.34	− 0.14	0.13	1.9	6	10	16	4	nw.	W. E. Morgan.
Guide Rock	Webster	1,646	12								0.15	− 0.77	0.10	0.5	2	12	10	8	nw.	J. S. Marsh.
Halsey	Thomas	2,695	9	32.4		58	25	1	11	44	0.05		0.03	1.2	2	12	13	5	nw.	U. S. Forest Service.
Hartington	Cedar	1,309	20	29.2	− 4.4	55	25†	− 3	12	41	0.55	− 0.52	0.25	5.5	4	13	7	10	nw.	D. E. Ewing.
Harvard	Clay	1,812																		Bert Gregg.
Hastings	Adams	1,932	21	31.6	− 6.6	65	26	− 1	12	39	0.30	− 0.42	0.10	3.0	4	17	8	5	nw.	C., B. & Q. R. R. Co.
Hayes Center	Hayes		18	33.6		63	4	− 2	12	39	0.28	− 0.41	0.05	2.2	6	19	6	5	nw.	C. A. Ready.
Hay Springs	Sheridan	3,821	25	28.6	− 4.6	56	21	− 7	12	38	1.05	+ 0.42	0.40	10.0	6	10	7	13	nw.	A. Kadlecek.
Hebron	Thayer	1,458	26	35.3	− 3.8	63	9†	1	12	42	0.25	− 0.94	0.15	T.	3					Dr. C. M. Easton.
Hemingford	Boxbutte	4,256	3								0.25		0.08		6					A. S. Enyeart.
Hendley	Furnas	2,231	7								0.10		0.10	1.0	1					T. L. Jones.
Hershey	Lincoln	2,902	1								0.02		0.02	T.	1	18	5	7		G. F. Palmer.
Hillside	McPherson	3,484	3	31.0		61	4	− 6	12	50	0.19		0.09	3.3	6	17	8	5	nw.	Mrs. M. R. Lloyd.
Holdredge	Phelps	2,324	21	32.4	− 5.4	62	9	0	12†	48	0.04	− 0.61	0.02	0.5	2	19	7	4	nw.	C., B. & Q. R. R. Co.
Hooper	Dodge	1,228	14	27.8	− 8.1	56	6†	− 4	12	45	0.30	− 0.92	0.20	1.0	2				nw.	Dr. W. H. Heine.
Hull (near)	Banner		1								0.40		0.40	4.0	1	16	6	8	w.	Mrs. W. P. Miller.
Imperial	Chase	3,278	21	34.4	− 3.1	63	4	− 4	12	46	0.10	− 0.45	0.05	1.5	2	11	11	8	nw.	Robt. Malcolm.
Kearney	Buffalo	2,146		33.1	− 5.4	63	9	− 1	12	49						20	1	9	n.	City Engineer.
Kimball	Kimball	4,697	23	32.9	− 3.0	64	10†	− 8	11	69	0.25	− 0.15	0.20	2.5	2	15	14	1	nw.	F. J. Bellows.
Kirkwood	Rock		17	29.9	− 4.3	62	4	− 6	12	48a	T.	− 0.58	T.	T.	0	19	6	5	nw.	Mrs. C. Arter.
Kowanda	Garden		3								T.		T.	T.	0					Geo. W. Hulse.
Lamar	Chase		1								0.10		0.05	1.0	2	18	7	5	nw.	R. L. McGaughey.
Lexington	Dawson	2,385	23	33.9	− 3.1	61	9†	− 4	12	47	T.	− 0.53	T.	T.	0	22	0	8	nw.	Robt. Chadwick.
Lincoln	Lancaster	1,189	30	33.6	− 4.4	62	9	2	12	36	0.05	− 0.80	0.02	0.5	3	12	9	9	nw.	U. S. Weather Bureau.
Lodgepole	Cheyenne	3,820	12	33.2	− 2.8	67	22	− 7	13	62	0.20	+ 0.01	0.20	2.0	1	16	7	7	w.	R. T. Kidney.
Loup City	Sherman	2,067	17	31.4	− 5.2	60	25	− 3	12	49	0.10	− 0.47	0.10	1.0	1	20	5	5	nw.	Harriet Hayhurst.
Loyal	Custer		3								T.		T.	T.	0				n.	C. H. Cass.
McCook	Redwillow	2,506	18	35.3	− 2.2	66	7	− 5	12	52	0.05	− 0.55	0.05	0.5	1	23	0	7	nw.	C. G. Coglizer.
McCool Junction	York	1,575	13								T.	− 1.05	T.	T.	0					L. L. Slagle.
Madison	Madison	1,585	19	28.5	− 7.2	60	25†	− 3	12	37	0.71	− 0.16	0.56	1.5	3	5	12	13	se.	Dr. F. A. Long.
Marquette	Hamilton	1,830	32								0.32	− 0.38	0.22	1.0	3					John Ellis.
Mary	Brown		1								0.07		0.05		2	12	14	4	nw.	G. C. Stufft.
Mason City	Custer	2,257																		J. A. Amsberry.
Minatare	Scotts Bluff	3,825	2								0.08		0.05	0.8	2	22	0	8	nw.	A. Kennedy.
Minden	Kearney	2,169	34	32.0	− 5.0	63	26	− 4	12	45	0.23	− 0.69	0.12	0.8	5	14	10	6	nw.	Joel Hull.
Mitchell	Scotts Bluff	3,950	3	32.2		65	10	− 15	12	54	0.10		0.07	2.0	2	16	11	3	nw.	U. S. Reclamation Service.
Mullen	Hooker	3,199																		C. R. Polen.
Nebraska City	Otoe	941	34	34.1	− 4.6	61	9	0	12	37b	1.10	+ 0.04	0.75	3.5	4	18	3	9	s.	C., B. & Q. R. R. Co.
Nelson	Nuckolls	1,683	1	34.8j		65j	26	1j	12	45j	0.30		0.15		4	17	7	6	nw.	Mack I. Koser.
Norfolk	Madison	1,532	27	31.4d	− 2.8	64	25	− 3	12	47d	0.81	− 0.07	0.60	2.8	5				nw.	Dr. P. H. Salter.
North Loup	Valley	1,961	24	32.5	− 3.7	63	9	− 1	12	51	0.36	− 0.19	0.30	0.7	4	16	8	6	nw.	W. G. Rood.
North Platte	Lincoln	2,841	38	32.6	− 2.5	63	4	− 4	12	45	0.04	− 0.36	0.02	0.2	2	10	14	6	w.	U. S. Weather Bureau.
Oakdale	Antelope	1,722	24	26.8	− 6.8	57	25	− 3	12†	45	0.39	− 0.27	0.22	1.8	5	12	10	8	nw.	G. S. Clingman.
Omaha	Douglas	1,103	41	32.8	− 4.9	59	9	1	12	36	0.42	− 0.64	0.16	2.8	7	11	10	9	nw.	U. S. Weather Bureau.
Ord	Valley	2,062																		Jas. Milford.
Orleans	Harlan	1,993	4								0.00		0.00	0.0	0					Jas. McGeachin.
Osceola	Polk	1,644																		G. T. Ray.
Palisade	Hitchcock		3								T.		T.	T.	0					E. E. Young.
Palmyra **	Otoe	1,142	19	33.4	− 5.8	60	9†	2	12		0.28	− 1.08	0.28	T.	1	19	7	4	n.	Thos. Coles.
Pawnee City	Pawnee	1,175	17	34.8		64	26	3	12	39	0.70	− 1.13	0.70	0.2	1	21	3	6	nw.	F. A. Barton.
Paxton	Keith	3,060	2								0.13		0.08	1.3	2	14	12	4	nw.	H. D. Lute.
Plymouth	Jefferson	1,419	7	33.1		62	9	2	12	40	0.52		0.32		5	15	5	10	nw.	John Ruppel.
Purdum	Blaine		10	31.2	− 6.0	58	25	− 8	12	47	0.13	− 0.49	0.05	1.3	3	18	6	6	nw.	T. C. Jackson.
Ravenna	Buffalo	2,028	34	32.4	− 4.6	62	9	− 2	12	48	0.20	− 0.33	0.19	0.8	4	17	8	5	nw.	H. G. Smith.

TABLE 1.—*Climatological data for November, 1911. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Nebraska—Continued.																				
Red Cloud	Webster	1,687	20	35.3	− 3.5	67	26	1	29	47	0.22	− 0.54	0.10	T.	6	19	5	6	nw.	Chas. S. Ludlow.
Saint Libory	Howard	1,887	17								0.23	− 0.55	0.18	0.5	2	13	11	6	nw.	W. I. Meader.
Saint Paul	do	1,796	19	32.7	− 5.7	63	9	0	12	42	0.17	− 0.60	0.12	0.5	2	22	3	5	nw.	Paul Anderson.
Santee	Knox		22	32.0	− 3.3	58	6†	− 2	12	43	0.60	− 0.27	0.60	6.0	1	16	12	2	se.	Nat H. Neff.
Sargent	Custer	2,339	15	32.0[b]		59		− 6	12	54	T.	− 0.51	T.	T.	0				nw.	J. L. Ferguson.
Schuyler	Colfax	1,357	18	31.2		58	30	− 2	12	54	T.	− 0.80	T.	T.	0	12	11	7	n.	J. T. Sumner.
Scottsbluff	Scotts Bluff	3,888	5	34.4		66	10	− 10	12	61	0.03		0.02	0.3	2	17	10	3	nw.	A. B. McCoskey.
Seward	Seward	1,435	21	32.5	− 6.1	62	8	0	11	40	0.10	− 0.94	0.10	T.	1	13	16	1	nw.	C., B. & Q. R. R. Co.
Sidney	Cheyenne	4,090	19								0.28	0.00	0.10	2.4	5	25	4	1	nw.	John P. Fischer.
Springview	Keyapaha		20	28.2	− 6.8	56	4	− 6	12	43	0.50	+ 0.05		5.0		14	10	6	nw.	C. L. Phelps.
Stanton	Stanton	1,472	20	30.0	− 5.3	58	10†	0	29	45	0.85	− 0.05	0.60	2.5	4	17	10	3	nw.	Alfred Pont.
Stratton	Hitchcock	2,804	16								T.	− 0.72	T.	T.	0					Miss Stella Vennum.
Superior	Nuckolls	1,574																		F. V. Bishop.
Syracuse	Otoe	1,050	19	34.0	− 4.6	64	9	2	12	40	0.55	− 0.67	0.46	T.	2	14	9	7	nw.	W. N. Hunter.
Table Rock	Pawnee	1,023	22								0.82	− 0.72	0.48	0.5	6	20	6	4	nw.	E. D. Howe.
Tecumseh	Johnson	1,113	34	36.2[a]	− 3.3	65[a]	9	2[a]	12	38[a]	0.42	− 0.79	0.42	T.	1	11	13	6		F. B. Thurber.
Tekamah	Burt	1,060	20	31.0	− 6.2	60	9	0	12	43	0.13	− 1.06	0.08	0.8	3	11	16	3	nw	Dr. A. D. Nesbit.
Tobias	Saline	1,597																		Frank Ainsworth.
University Farm	Lancaster		28	34.9	− 4.8	62	9	1	12	38	0.16	− 0.85	0.07		3	14	11	5		S. W. Perin.
Valentine	Cherry	2,613	23	28.1	− 5.6	58	21	− 7	12	44	0.05	− 0.68	0.03	0.5	3	10	14	6	nw.	U. S. Weather Bureau.
Wahoo	Saunders	1,187	9								0.10		0.10	0.0	1	18	7	5		W. T. Mauck.
Wakefield	Dixon	1,387	18	29.4	− 6.8	58	25	− 3	12	42	0.93	− 0.07	0.50	4.3	4	12	9	9	nw.	I. H. Weaver.
Walthill	Thurston		9	27.8[f]		58	27	1	2†	40[j]	0.28		0.25	T.	2					A. P. Coleman.
Watertown	Buffalo	2,299	6								0.01		0.01	0.2	1	14	16	0	nw.	R. E. Swift.
Wauneta	Chase		13								0.00	− 0.72	0.00	0.0	0					C. D. Fuller.
Weeping Water	Cass	1,080	34	33.3		62	9	1	12	44	0.27	− 1.01	0.23	0.5	4	20	1	9	nw.	S. W. Orton.
Westpoint	Cuming	1,313	24	31.8	− 6.4	68	9	3	12†	42	0.20	− 0.81	0.20	2.0	1	18	5	7	nw.	J. C. Elliott.
Wisner	do	1,380	15								0.46	− 0.71	0.23		3					F. C. Evans.
York	York	1,633	23	33.6	− 4.5	62	9	0	12	44	0.29	− 0.51	0.08	2.0	5	18	7	5	nw.	A. T. Glauque.
Iowa.																				
Afton	Union	1,212	17	33.4	− 3.4	56	26	2	12	37	0.94	− 0.29	0.53	T.	3	12	8	10	sw.	N. W. Rowell.
Allerton	Wayne		9	33.4		71	11	2	29	5o	1.98		0.58	2.0	9	13	5	12	nw.	Mrs. Geo. Shriver.
Alton	Sioux	1,305	6	27.6		50	9†	− 4	12	40			0.18	2.5		12	12	6	nw.	W. S. Slagle.
Atlantic	Cass	1,164	20	31.6	− 3.8	58	9	-0	12	35	0.53	− 0.45	0.32	0.5	4	9	7	14	nw.	Thos. H. Whitney.
Audubon	Audubon	1,301	17	30.6	− 4.6	55	26	0	12	33	0.70	− 0.64	0.44	0.6	6	12	7	11	nw.	Geo. E. Kellogg.
Bedford	Taylor		11	32.9	− 2.5	60	26	1	12	38	1.45	+ 0.16	0.67	1.8	7	14	6	10	nw.	E. E. Healy.
Centerville	Appanoose		1	33.4		73	11	2	29	55	3.34		1.00	3.2	9	18	7	5	w.	Gordon Peacock, jr.
Chariton	Lucas	1,042	16	32.6	− 6.1	66	11	0	29	51	1.30	0.00	0.55	2.0	5	12	9	9	nw.	C. C. Burr.
Clarinda	Page	1,009	21	31.8	− 6.0	60	9	2	12	46	1.09	− 0.07	0.55	1.0	4	18	1	11	s.	A. S. Van Sandt.
Corning	Adams	1,117	19	31.6	− 5.6	56	9	0	12	43	0.77	− 0.43	0.50	T.	2	15	1	14	nw.	Jerome Smith.
Corydon	Wayne	1,101	18			70	11	2	29						7	8	8	14	sw.	May C. Miller.
Council Bluffs	Pottawattamie		1	32.0		62	9	0	12	40	0.60		0.30	3.0	3	11	9	10	nw.	B. W. Crossley.
Creston	Union	1,312	6	30.0		58	26	0	12	47	1.23		0.57	0.5	4	8	7	15	nw.	O. J. Colby.
Cumberland	Cass		12								0.51	− 0.47	0.46	0.5	2	15	6	9	nw.	J. H. Reppert.
Denison	Crawford	1,180	17	30.4	− 5.2	58	9	− 1	12	38	0.37	− 0.64	0.25	T.	2	11	9	10	n.	W. C. Van Ness.
Elliott	Montgomery		6																	Henry Barnes.
Greenfield	Adair		19	30.6	− 6.0	57	26	0	12	33	1.02	− 0.15	0.45	0.5	3	12	9	9	nw.	R. B. Oldham.
Harlan	Shelby	1,182	12	30.4	− 6.8	57	9	0	12	37	0.32	− 0.72	0.22	T.	5		8	15	nw.	C. A. Reynolds.
Inwood	Lyon	1,474	7	26.1		50	25	− 6	12	44	0.19		0.05	2.5	4	15	4	11	nw.	F. B. Hanson.
Lamoni	Decatur		4	33.0		67	11	3	12†	56	1.00		0.40	2.5	8	11	2	17	nw.	T. J. Fitzpatrick.
Larrabee	Cherokee	1,266	21	27.6[f]	− 5.3	55[f]	26	− 6[f]	12	42[f]									nw.	R. H. Gray.
Le Mars	Plymouth	1,224	15	28.2	− 6.3	52	9	− 3	12	38	0.42	− 0.81	0.25		4	7	18	5	nw.	G. A. C. Clarke.
Lenox	Taylor	1,250	16	32.0	− 5.9	56	9†	1	12	38	1.47	+ 0.25	0.67	0.5	7	17	5	8	s.	J. L. Hurley.
Leon	Decatur	1,120	9	31.8		66	11	0	29	52	1.37		0.50	2.0	9	10	3	17	nw.	Morris Gardner.
Little Sioux	Harrison		6	31.4		60	9	− 2	12†	47	0.17		0.07	1.8	3	12	6	12	nw.	Geo. H. Gibson.
Logan	Harrison	928	44	31.4	− 4.5	64	26	0	12	40	0.23	− 1.02	0.10		4	8	13	9	nw.	Glenn H. Stern.
Mount Ayr	Ringgold	1,236	18	33.3	− 5.6	61	10†	1	12	51	1.91	+ 0.55	0.88	1.5	7	11	8	11	sw.	A. F. Beard.
Murray	Clarke		20	32.6	− 4.1	57	26	2	12	44	1.39	+ 0.30	0.45		6	5	15	10	nw.	M. T. Ashley.
Northboro	Page			36.0		62	9	6	29	37	0.60		0.43	1.5	4	14	7	9	nw.	J. M. Darby.
Odebolt	Sac		14	30.2	− 6.3	58	26	− 1	12	40	0.11	− 1.03	0.06	0.5	2	16	6	8		E. Starner.
Onawa	Monona	1,051	11	32.2	− 6.1	58	9†	0	12	42	0.22	− 1.26	0.06	1.7	5	12	11	7	nw.	C. G. Perkins.
Pacific Junction	Mills	960	12	31.2	− 7.9	60	9	0	12	38	0.15	− 0.79	0.13	1.3	2	13	12	5	n.	H. H. McCartney.
Rock Rapids	Lyon	1,358	12	26.8	− 5.1	52	26	− 4	12	42	0.22	− 0.84	0.12	2.2	3					W. C. Wyckoff.
Sheldon	O'Brien	1,422	11	25.6	−10.5	54	9	− 5	12	38	1.07	− 0.01	0.20	4.0	11	6	11	13	n.	Dr. A. W. Beach.
Sibley	Osceola	1,212	18	24.0	− 8.0	52	26	− 4	12	41	0.52	− 0.47	0.18	2.0	5	9	7	14	nw.	H. G. Doolittle.
Sioux Center	Sioux		12	27.1	− 8.2	50	9	− 4	12	38	0.20	− 0.51	0.10	2.0	2	11	12	7	nw.	J. de Ruyter.
Sioux City	Woodbury	1,135	22	28.6	− 5.7	54	25	− 1	12	39	0.62	− 0.35	0.37	3.1	9	11	8	11	nw.	U. S. Weather Bureau.
Spencer	Clay		1	27.6		50	25†	− 4	24	42									s.	S. Gillespie.
Thurman	Fremont		14	32.4	− 6.2	60	9	2	12	37	0.53	− 0.77	0.41	1.7	6	10	11	9	nw.	C. R. Paul.
Washta	Cherokee	1,157	13	29.1	− 7.4	58	26	− 2	12	44	0.17	− 0.80	0.12	0.5	2	12	5	13	nw.	H. L. Felter.
Woodburn	Clarke	961	12	33.9		64	9†	3	29	49	1.17	− 0.07	0.50	T.	7	11	4	15	nw.	C. B. McDonough.
Kansas.																				
Abilene	Dickinson	1,157	16								0.72	− 0.28	0.66	T.	2	12	8	10	sw.	T. W. Sherman.
Agricultural College	Riley	1,100	53	38.4	− 3.3	71	16	5	29	48	1.05	− 0.26	1.00	0.4	3	20	3	7	w.	Prof. J. O. Hamilton.
Alton	Osborne	1,651	9	37.2		68	16	2	12†	53	0.22	− 0.83	0.16	0.4	3	15	11	4	nw.	H. A. Storer.
Atchison	Atchison	973	20	37.6	− 4.2	67	11	4	12†	55	1.27	0	0.52	1.3	7	19	7	4	w.	Prof. M. F. Troxell.
Beloit	Mitchell	1,383	16	37.1		72	16	3	29	46	0.17	− 0.80	0.17	T.	1	16	8	6	nw.	F. A. Slack.
Blakeman	Rawlins	2,894	14	35.0		66	4	0	12	49	0.17	− 0.37	0.05	2.0	5	20	2	8	nw.	C. L. Henderson.
Blue Rapids	Marshall	1,105	5								0.70		0.70	T.	2	14	3	13		M. Norton.
Centralia	Nemaha	1,256	2	35.8		64	9†	2	12†	50	0.82		0.35	0.1	4	18	3	9	nw.	N. S. Hazen.
Chapman	Dickinson	1,113	7	37.5		74	16	4	29	43	1.05		0.80	T.	2	19	4	7	sw.	Dr. R. McShea.
Clay Center	Clay	1,203	10	38.4		72	16	2	29	50	0.77		0.72	0.5	2	13	7	10	s.	O. L. Slade.
Colby	Thomas	3,138	20	36.8	− 2.8	68	15	0	12	45	0.06	− 0.45	0.01	2.5	6	15[a]	6[a]	8[a]	nw.	G. H. Kinkle.
Concordia	Cloud	1,398	27	37.4	− 2.5	71	16	4	12	47	0.46	− 0.48	0.45	0.1	2	10	13	7	nw.	U. S. Weather Bureau.
Denamore	Norton	2,200	2	36.6		65	9†	1	12	39	0.05		0.05	0.5	1	9	13	8	nw.	J. J. Griffith.
Dresden	Decatur	2,731	17	36.6	− 5.1	64	9†	0	12	46	0.15	− 0.43	0.12	1.2	2	18	7	5	nw.	Jacob Bock.
Ellsworth	Ellsworth	1,537	7	37.1		73	16	1	29	47	0.84		0.50	T.	3	13	12	5	s.	Geo. Seitz.
Enterprise	Dickinson	1,144	9	39.7		74	16	4	29	49	0.93	− 0.07	0.50	T.	4	19	2	9	s.	J. R. Clark.
Eskridge	Wabaunsee	1,412	5	38.0		70	10	4	12†	55	0.92		0.35	1.5	7	16	6	8	s.	Geo. D. West.
Farnsworth	Lane	2,850	10	37.0	− 6.2	70	15	2	29	51	0.46	− 0.47	0.30	T.	3	17	5	8	nw.	C. M. Jennison.
Fort Scott	Bourbon	857	36	40.5	− 5.6	82	11	5	29	60	2.11	− 0.39	0.60	1.5	7	20	0	10	sw.	E. A. Shaver.
Frankfort	Marshall	1,146	17	35.8	− 6.0	67	16	4	29	42	1.04	− 0.17	0.77	0.2	3	8	19	3	sw.	E. C. Dunham.
Garnett	Anderson	950	5	39.7		70	10	4	29	51	1.13		0.50	3.5	5	13	9	8	s.	D. D. Judy.

TABLE 1.—*Climatological data for November, 1911. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Kansas*—Continued.**																				
Goodland	Sherman	3,687	4	35.4	.....	99	16	— 2	12	49	0.60	.....	0.20	6.0	4	20a	2a	7a	n.	C. C. Calvert.
Gove	Gove	2,750	22	35.1	— 4.7	67	9†	— 3	29	46	0.08	— 0.51	0.08	0.8	1	15	8	7	nw.	Jesse Royer.
Hanover	Washington	1,225	14	37.0	.....	68	16	4	12	39	0.57	— 0.40	0.35	0.6	5	16	5	9	nw.	A. Jaedicke, jr.
Harrison	Jewell	1,804	10	35.3	— 5.8	64	16	3	12†	47	0.21	— 0.81	0.12	T.	2	22	6	2	n.	Mahlon Tegley.
Hays	Ellis	2,000	43	36.9	— 3.5	68	16	1	29	52	0.14	— 0.58	0.14	T.	1	18	7	5	nw.	G. K. Helder.
Hill City	Graham	2,134	3	35.3	.....	65	9†	0	11	44	0.28	.....	0.20	2.8	2	17	7	6	nw.	J. L. Crank.
Horton	Brown	1,188	22	36.8	— 4.5	64	16	4	12	52	1.05	— 0.17	0.60	T.	4	20	4	6	nw.	Mrs. S. C. Belden.
Hoxie	Sheridan	2,700	13	37.0	— 3.7	66	15	1	12	41	0.05	— 0.63	0.05	0.5	1	16	10	4	n.	I. L. Vinson.
Jewell	Jewell	1,540	6	.....	.....	.....	.....	.....	.....	.....	0.33	.....	0.33	T.	1	14	3	13	.....	C. A. Shinn.
Lawrence	Douglas	997	43	38.2	— 3.4	73	10†	4	29	61	2.01	+ 0.18	0.49	4.0	6	13	12	5	nw.	Prof. H. P. Cady.
Leavenworth	Leavenworth	913	67	39.4	— 2.1	70	11	5	29	53	0.84	— 1.25	0.66	0.3	3	20	9	1	s.	Dr. A. F. Yohe.
Lebanon	Smith	1,812	13	35.5	— 4.6	65	17†	2	12	44	0.12	— 0.77	0.12	T.	1	18	0	12	n.	E. V. Bower.
Leoti	Wichita	3,300	8	36.0	.....	68	21	1	12	45	0.33	.....	0.23	6.0	2	18	8	4	s.	Fred Burnham.
Lindsborg	McPherson	1,333	5	.....	.....	.....	.....	.....	.....	.....	0.93	.....	0.75	T.	3	14	3	13	s.	A. J. Frederickson.
McCracken	Rush	2,139	...	38.4	.....	68	6†	2	29	56	0.56	.....	0.50	0.5	3	19	3	8	sw.	E. D. Floyd.
Mankato	Jewell	1,784	2	36.4	.....	67	6†	4	27	42	0.09	.....	0.03	0.9	6	18	2	10	nw.	W. F. Isaac.
Minneapolis	Ottawa	1,259	21	37.8	— 3.0	71	16	5	29	40	0.87	+ 0.11	0.57	0.5	3	19	2	9	nw.	J. L. Steele.
Moran	Allen	1,098	15	40.8	— 4.9	78	11	5	29	60	2.03	+ 0.69	0.69	3.0	7	13	5	12	sw.	C. J. Norton.
Natoma	Osborne	1,834	2	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	T.	0	13	6	11	n.	C. O. Hunt.
Norton	Norton	2,284	13	36.5	— 4.4	64	9	1	12	35	0.50	+ 0.04	0.50	0.2	1	19	7	4	nw.	Sim Sieffel.
Oberlin	Decatur	2,539	24	.....	.....	.....	.....	.....	.....	.....	0.24	— 0.39	0.08	3.5	4	23	3	4	nw.	I. K. Huber.
Oketo	Marshall	1,194	3	35.2	.....	62	9†	3	12	35	0.83	.....	0.62	0.8	6	6	20	4	sw.	J. A. Church.
Olathe	Johnson	1,032	16	38.1	— 6.6	76	11	3	29	62	1.77	— 0.14	0.66	5.0	8	14	5	11	sw.	Dr. S. B. S. Wilson.
Osage City	Osage	1,081	12	.....	.....	73	10	.....	.....	.....	1.15	— 0.72	0.44	3.8	4	16a	1a	11a	n.	W. C. White.
Ottawa	Franklin	926	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. F. McDougal.
Phillipsburg	Phillips	1,939	20	37.0	— 3.0	65	9	0	12	43	0.12	— 0.44	0.05	1.2	3	19	4	7	nw.	N. E. Bailey.
Plainville	Rooks	2,156	5	.....	.....	.....	.....	.....	.....	.....	0.17	.....	0.10	T.	3	23	1	6	n.	P. D. Spellman.
Pleasanton	Linn	862	9	38.8	.....	77	11	6	29	56	1.81	.....	0.46	0.5	7	17	6	7	sw.	B. F. Blaker.
Republic	Republic	1,495	8	36.7	.....	70	16	0	29	50	0.25	.....	0.25	T.	1	.....	.....	.....	.....	J. W. Ambrose.
Russell	Russell	1,834	12	36.0	— 6.5	72	16	0	29	52	T.	— 0.94	T.	T.	0	18	4	8	nw.	Robert Brebner.
Russell Springs	Logan	.....	1	38.8	.....	69	15	— 2	12†	51	0.07	.....	0.05	0.8	2	20	4	6	nw.	D. J. Hutto.
Saint Francis	Cheyenne	3,288	3	35.9	.....	68	15	— 1	12	48	0.16	.....	0.11	1.0	4	16	8	6	nw.	J. E. Uplinger
Salina	Saline	1,227	27	38.4	— 4.8	68	16	7	29	38	0.98	+ 0.21	0.40	T.	4	14	8	8	s.	Prof. A. W. Jones.
Scott	Scott	2,971	5	38.9	.....	72	15	1	29	49	0.82	.....	0.58	6.0	2	15	11	4	n.	J. B. Loughran.
Smith Center	Smith	1,800	1	.....	.....	.....	.....	.....	.....	.....	0.05	.....	0.05	0.5	1	22	3	5	nw.	W. H. Nelson.
Topeka	Shawnee	997	25	38.5	— 3.2	73	10	7	12	58	0.96	— 0.30	0.65	2.0	7	12	11	7	s.	U. S. Weather Bureau.
Valley Falls	Jefferson	913	12	37.0	— 4.1	67	11	2	12†	56	1.37	— 0.17	0.50	3.0	8	12	11	7	s.	Miss Nettie Maxwell.
Vinland	Douglas	880	2	.....	.....	.....	.....	.....	.....	.....	1.81	.....	0.69	5.0	7	.....	.....	.....	.....	A. Schick.
Wakeeney	Trego	2,456	28	36.6	— 4.1	68	15	1	12	41	0.07	— 0.60	0.07	1.0	1	20	4	6	nw.	A. S. Peacock.
Wallace	Wallace	3,303	41	36.8	.....	71	21	— 3	12	51	0.09	— 0.38	0.09	3.0	1	10	17	3	sw.	M. T. Griggs.
Wamego	Pottawatomie	1,002	18	.....	.....	.....	.....	.....	.....	.....	1.30	+ 0.10	0.75	2.0	5	16	9	5	n.	M. L. Stone.
Missouri.																				
Amoret	Bates	850	3	40.3	.....	79	11	8	12	60	1.50	.....	0.71	T.	4	12	11	7	nw.	Darby Fruit Farm.
Appleton City	Saint Clair	853	22	40.0	— 5.3	82	11	8	12†	60	2.34	0.00	0.67	1.5	6	10	11	9	sw.	T. C. Brown.
Arthur	Vernon	767	20	42.3	— 2.1	82	11	8	29	60	1.75	— 0.25	0.58	T.	5	17	7	6	sw.	J. T. Armstrong.
Avalon	Livingston	.....	27	36.4	— 7.2	77	11	1	29	56	2.90	+ 0.77	1.20	1.0	6	16	3	11	nw.	F. G. Ashbaugh.
Bethany	Harrison	881	21	34.8	— 9.0	68	11	4	29	52	1.33	— 0.26	0.56	0.2	4	13	5	12	sw.	W. H. Skinner.
Bolivar	Polk	1,070	24	41.5	— 5.1	81	10	7	29	50	3.18	+ 0.44	1.79	0	5	15	12	3	sw.	A. C. Fink.
Boonville	Cooper	600	34	.....	.....	.....	.....	.....	.....	.....	2.81	+ 0.38	1.06	2.0	6	13	4	13	nw.	C. Randecker.
Brunswick	Chariton	652	34	36.8	— 4.9	79	11	6	29	38	2.48	+ 0.45	0.87	1.0	7	13	6	11	nw.	Louis Benecke.
Clinton	Henry	800	25	41.2	.....	80	11	10	12	58	3.10	+ 1.17	1.10	0	6	8	14	8	nw.	A. E. Derwent, M. D.
Columbia	Boone	784	22	37.7	— 4.7	82	11	6	29	69	2.49	+ 0.18	1.01	2.8	8	11	10	9	s.	U. S. Weather Bureau.
Conception	Nodaway	982	29	34.8	— 6.1	65	11	2	12	55	1.23	— 0.10	0.67	1.7	7	10	10	10	nw.	Fr. Adhelm Hess.
Crocker	Pulaski	1,121	1	41.8	.....	83	11	9	13	65	4.63	.....	1.27	0.5	5	16	4	10	se.	Ira H. Stephens.
Eldorado Springs	Cedar	750	7	40.0	.....	69	16	8	29	52	2.39	.....	1.14	1.0	4	12a	3a	14a	sw.	Samuel Graham.
Fayette	Howard	725	29	36.7	— 6.1	80	11	4	28†	70	2.76	+ 0.72	1.05	0.2	7	14d	3d	9d	.....	Prof. T. Berry Smith.
Fulton	Callaway	818	21	39.8	— 5.1	80	11	5	29	48	2.45	+ 0.18	0.71	0.3	7	13a	6a	10a	.....	Russel Johnston.
Glasgow	Howard	618	35	.....	.....	.....	.....	.....	.....	.....	2.35	+ 0.45	0.94	4.0	8	16	2	12	nw.	J. J. Shaughnessy.
Grant City	Worth	1,130	20	34.9	.....	57	6	2	12	32	1.47	+ 0.04	0.55	3.0	7	14	4	12	s.	W. H. Campbell.
Harrisonville	Cass	912	39	36.7	— 5.3	79	11	5	30	40	1.91	— 0.11	1.11	0.5	6	11	4	15	nw.	A. J. Sharp.
Hazelhurst	Livingston	.....	19	.....	.....	.....	.....	.....	.....	.....	1.67	— 0.02	0.43	1.5	9	.....	.....	.....	.....	W. H. Baker.
Hermann	Gasconade	482	38	.....	.....	.....	.....	.....	.....	.....	2.44	— 0.48	0.71	T.	8	11	9	10	nw.	C. T. Maushund.
Houston	Texas	1,280	20	40.8	— 5.2	79	11	7	12	63	2.00	— 0.63	0.50	1.0	7	13	12	5	s.	E. Dempsey.
Jefferson City	Cole	628	31	36.7	— 7.4	80	11	6	29†	39	2.19	— 0.07	0.72	0.7	8	17	0	13	w.	Miss Emma Swift.
Kansas City	Jackson	963	22	39.0	— 2.5	76	11	6	12	65	2.17	+ 0.32	0.61	2.6	9	8	11	11	nw.	U. S. Weather Bureau.
Kidder	Caldwell	1,017	21	36.2	— 5.2	70	11	2	29	34	1.27	— 0.43	0.52	0.4	6	15	2	13	nw.	J. F. Sharp.
Lamonte	Pettis	863	24	38.5	.....	82	11	6	29	63	1.52	— 0.42	0.54	1.0	5	14a	1a	14a	sw.	J. Ed. Hall.
Lebanon	Laclede	1,265	24	41.2	— 4.8	80	11	10	12†	50	3.84	+ 1.30	1.34	1.0	7	12	8	10	sw.	M. W. Seri.
Lexington	Lafayette	813	30	37.5	— 6.0	76	10	6	29	36	2.22	+ 0.30	0.65	0.7	7	16	0	14	s.	J. W. Keithley.
Liberty	Clay	864	24	37.8	— 5.1	76	11	5	29	59	1.62	— 0.10	0.65	3.0	7	10	6	14	sw.	W. C. Wilmott.
Lockwood	Dade	1,088	17	42.0	.....	81	11	10	12†	57	3.09	+ 1.00	1.39	0.5	5	13	1	16	sw.	C. S. Crow.
Marshall	Saline	779	22	39.2**	— 3.6	82	11	6	29	36	2.49	+ 0.37	0.68	0.5	6	15b	5b	8b	se.	Prof. W. H. Black.
Maryville	Nodaway	1,160	22	32.5	— 6.2	63	10	2	12†	40	1.15	— 0.27	0.64	0.8	4	12	0	18	nw.	J. R. Brink.
Mount Vernon	Lawrence	1,480	34	40.6*	— 6.7	70	16	9	13†	34	2.59	— 0.35	0.87	2.0	6	12	10	8	sw.	J. R. White & Son.
Nevada	Vernon	860	18	.....	.....	.....	.....	.....	.....	.....	2.59	+ 0.64	0.98	0.2	6	16	10	4	sw.	C. Jewell.
Oregon	Holt	1,113	57	34.0	— 6.6	65	17	— 3	12	53	0.78	— 0.93	0.35	0.5	5	13	2	15	nw.	Tom Curry.
Pattonsburg	Daviess	.....	2	.....	.....	.....	.....	.....	.....	.....	1.81	.....	0.66	0	5	8	1	21	nw.	Wm. Burton.
Rolla	Phelps	1,139	31	40.2	— 3.0	78	11	9	12	44	3.06	+ 0.54	1.02	0.5	9	17	5	8	nw.	Prof. P. J. Wilkins.
Saint Charles	Saint Charles	614	34	41.7	— 3.0	78	11	12	12	63	0.37	— 2.48	0.22	1.5	3	7	14	9	s.	L. C. Saeger.
Saint Joseph	Buchanan	825	40	36.2	.....	67	11	5	12	59	1.56	— 0.27	0.69	2.0	7	11	10	9	nw.	U. S. Weather Bureau.
Saint Louis (1)	Saint Louis City	567	40	39.2	— 4.3	78	11	12	12	60	3.44	+ 0.56	0.97	1.4	11	9	10	11	s.	Do.
Saint Louis (2)	...do...	578	1	40.0	.....	77	11	13	12†	38	3.76	.....	0.75	3.4	12	10	7	13	se.	St. Louis University.
Sublett	Adair	1,000	32	34.8	— 5.9	75	11	2	29	53	2.75	+ 0.91	1.00	0.5	7	8	7	15	nw.	Lewis Spriggs.
Trenton	Grundy	812	17	35.5	— 6.5	71	11	4	29	53	1.54	— 0.16	0.46	1.0	9	14	3	13	s.	W. H. Estes.
Unionville	Putnam	1,072	19	32.0	— 7.6	73	11	0	29	34	3.39	+ 1.61	0.76	3.0	8	13	3	14	s.	Geo. W. Davis.
Warrensburg	Johnson	883	33	39.4	— 5.0	78	10	7	29	51	1.41	— 0.34	0.47	1.3	6	17	3	10	.....	A. F. Smithson.
Warrenton	Warren	865	22	37.0	— 5.7	78	11	7	30	36	2.48	+ 0.21	0.72	1.5	8	7	8	15	nw.	Prof. John H. Frick.
Warsaw	Benton	700	8	40.2	.....	81	10†	10	29	57	3.50	.....	1.27	0.5	9	11	9	10	sw.	J. R. Smith, M. D.
Wheatland	Hickory	920	20	.....	.....	.....	.....	.....	.....	.....	4.42	+ 1.81	1.30	3.0	8	10	9	11	s.	Mrs. S. A. Jackson.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1911. District No. 6, Missouri Valley.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Wyoming.																																
Arapahoe	Bighorn					.04				.02	.05						.07										T.					0.18
Barnum	Powder	.04				.15	T.					.14					.50							.30		.10	T.					1.23
Basin	Bighorn									.27						.07																0.34
Bennett	North Platte	.03				.08	.05				.01	.17	.08							.12	.06						.09					0.69
Big Creek Station	do																															.....
Burns	South Platte																															.....
Casper	North Platte										.20	.40							.20				.02				.10				.03	0.95
Centennial	do	.17				T.	.42		.04	.12	.08	.10	.05		T.		.03	.02	.08	T.			.01				.20	.01				1.33
Cheyenne	South Platte	.08	.01			T.	.05		T.	T.	.10	.28					T.						T.				.04	.03				0.59
Chugwater	North Platte	T.										.20											T.				.20	.20				0.60
Clark	Yellowstone	T.				.04	T.			.42	.32	.16			T.	.66	.31										T.	T.				1.91
Cody	Bighorn																															.....
Crazy Creek	Yellowstone						.30		.03	.20	.30	.03	.01	.36	.06	.45	.54	.04	.09	.05		.05					.10					2.61
Dome Lake	Tongue					.25	.25			.10		.05			.20	.10	.25	.15	.10	.05			.15				.10					
Douglas	North Platte				T.	T.					.15						.03					.17					.11	.02				0.48
Dubois	Bighorn	.10				T.	T.			.30	.30	.40											T.				.05					1.15
Eatons Ranch	Tongue									.20	.30					.50	.50						.30				.20	.30				2.30
Echeta	Powder					.10					.32						.30	.76	.20								.20	.25				2.13
Elk Mountain	North Platte					.10	.09			.15	.26						.54						.27				.65					2.06
Encampment	do	T.					.16	T.		.07	.01	.10		T.	T.		.06	.02					.02				.04		T.			0.48
Ervay	Powder	T.				T.					T.	.20					.18						.09				.06	.14				0.67
Fort Laramie	North Platte										T.	.60						.50										T.	T.			1.10
Fox Park	do								.24	.32	.40			.32					.24									.40	.40		.48	2.80
Germania	Bighorn									.05	T.	.10				T.	.15										T.					0.30
Gillette	Powder									.10	.15	.10					.38	.30	T.				T.			.22	.10	.25	.20			1.80
Horse Creek	Bighorn																															.....
Hunters Station	Powder				.08	.47				.08	.32	.09				T.	.19										.09	T.				1.32
Hyattville	Bighorn					.05						.01					.20															0.26
Jireh	Niobrara					.10	.20										.20										.20	.30				1.00
Kirtley	do																											.30				0.30
Kirwin	Bighorn																															.....
Knowles	Cheyenne	T.				.32	.03			.01	.09	.12					.41		.65		.08							.18				1.89
Lagrange	North Platte	T.					.05					.15															.05	.05				0.30
Lander	Bighorn	.02				.01				T.	.15	T.					.30						.06				.14	T.				0.68
Laramie	North Platte	.02					.07			.03	.02	.15					.01						.05				.04	T.				0.39
Leo	do																															.....
Lolabama Ranch	Bighorn					.05					.05		.10	.08	.15	.06																0.49
Lovell	do									.14	.06	.01				.16	.17															0.54
Lusk	Niobrara																															.....
Manville	do	.05				.15						.01					T.	.02												.30		
Moorcroft	Cheyenne					.03							.25						.55	.10			T.							.50		0.53
Moore	North Platte	.05										.19					T.						.17				.16	.01				1.43
Newcastle	Cheyenne					.02	T.			.20	.20	.30					T.	.20	.50	T.			T.				.10	T.				0.58
Pathfinder	North Platte	.03								T.	.15	.10					T.	.20	.50	T.			T.				.13	.11				1.52
Pinebluff	South Platte							.11				.14					11															0.52
Pine Ridge	Cheyenne		T.		T.						.20		.06																.14			0.31
Powell	Bighorn									.08	.06					.50	.80							.10	.10	.05						1.75
Rambler	North Platte															.17																0.31
Rawlins	do	T.			T.	.16	.02			.04	.02	.36			T.		.21	.03					.04				.16	.10				1.14
Riverton	Bighorn					.08				T.		.02					.01						T.				T.		.06			0.17
Rockypoint	Powder					.05	.03			T.	.15	.10					.20		.45	T.	.23						.08	.40				1.69
Saratoga	North Platte	T.				.14			.01	.01	.02	.28					.05	.04					.01				.10	.01				0.67
Seven Mile Creek	do	.10											.28										.15				.12					0.65
Sheridan	Tongue				T.	T.	T.		T.	.03	.02	T.				.02	.37	.01	T.	.01		.02	.02				.04	.04				0.58
Shoshone Dam	Bighorn				T.					.24	.20	.05				.20	.04															0.73
Soldiers Home	Powder	.10								.10	.40	.10				.10	.20															1.00
South Pass City	North Platte	T.			.05		.18	.03	.06	.22	.48	.02	T.	.46	.07	T.	.22	.02					.02				.01	.06				1.90
Sundance	Cheyenne					.05	.06			.10		.30					.60	.20	.40	.10							.20	.22				2.23
Thermopolis	Bighorn	.02				.32					.02	.01					.34											T.				0.71
Verona	Tongue				.01							.15					.13				.10						.31					0.70
Wheatland	North Platte	.03										.03					T.										.01	.01				0.08
Wiants Ranch	do					.05	.02					.10											.05				.04	.04				0.30
Wiley	Bighorn				.10	.10	.10																				.10	.15				0.75
Woodrock	Tongue				.07	.16	.50			.50	.75		T.	T.	.28	.20	.35	.40	.30	T.		T.	.25				.55	.42				5.00
Worland	Bighorn					.12				.05		.02				.47	.20															0.39
Wyncote	North Platte						T.				T.	.07															.03	T.				0.10
Yellowstone Park	Yellowstone			T.	.01	.04		T.	.46	.43	.44		T.	.09	.01	.34	.18	T.	.02	.01		.10	.03				.17					2.33
Fairview Dome	do					.02				.20	.90			.40	.20	.01		.30	.20													2.23
Fountain	Madison		.15		.30	.40	.40	.50			1.00			.18																		2.93
Gallatin	Gallatin				.15	.20		.20	.10	.05	.16	.05	.28	.10			.12		.20	T.		.18	.03				.19					2.01
Grand Canyon	Yellowstone				.10	.25	.42	.10	T.	.30	.28		.10	.40	.20	.08		.10				.05					.10					2.48
Lake Yellowstone	do				.10	.05	.30	.20	.40	.40						.30			.15													1.90
Norris	do			T.	.08	T.	.15	.07	.16	.25	.37	.06	.03	.28	.04	.28	.23	.32	.18	.19		.03					.04	.03				2.79
Riverside	Madison				.30	.70	1.00	.11	.14	.10	.20		.10			.20			.10													2.95
Sylvan Pass	Bighorn				.03						1.00					1.37			1.25				.45									4.10
Thumb	Yellowstone				.10	.30		.12	.17	.50	.60		.15	.30		.30		.08		.05													2.67
Tower Falls	do				.14					.16	.40		T.				.14	.10	T.			.10											1.04
Upper Geyser Basin	Madison				T.	.40	.50		.15	.25	.18			.30		.15			.11			.10					.05					2.19
Montana.																																
Adel	Missouri			T.					.20	.10	.20			T.	.02								.05				.40	.30				1.31
Agricultural College	Gallatin				T.	.03		T.	.22	.34					.31							.10										1.00
Augusta	Missouri								*	*	*	.82																.30				1.16
Babb	St. Marys				T.	T.	T	.20	1.00	.12	T.		.40	.35	.40			T.	.02	.30	T.		T.				.30					3.09
Badger Creek	Marias																															.....
Bald Butte	Missouri			T.	T.	.06	.12	.04	.08	.14	.08		T.	.18	.22		T.	.14	T.	.11		T.					.36					1.53
Bigtimber	Yellowstone									.28	.20			.08																		0.56
Bigtimber Creek	do	.03					.04	.07		.15	.32						.15	.58										.13				1.47
Billings	do									.04	.04									.15	.02						.02	.01				0.28
Blackleaf	Missouri				.06		.02	.02	.25	.17	.10		.10	.14	.08				T.	.21	.02						.35					1.52
Bloomfield	Yellowstone																															.....
Boulder Nursery	Jefferson																															.....
Bowen	do				.15	.02		.14	.05	.06	.22	.05		.16	.07	.15	.01			.03							.03					1.14
Bridger	Yellowstone									.12	.06						.07										.12					0.37
Broadview	do							T.	T.	T.	.06									.13							.10					0.29
Busby	do						.02			.06	T.						.02	.07	.01	.13	.17	.03					.07	.04				0.62
Busteed	do	.04							.01	.09	.11		T.							T.	.09						.02					0.36
Cabin Creek	Jefferson				.02	.01	.03			.06	.03	.01		T.		.15	.08										T.					0.34
Canyon Ferry	Missouri								.06	.02										T.												0.08
Cascade	do				.07				.05	.18	.10	T.		T.	.01				T.	.07		T.			T.	.32					0.87
Chessman Reservoir	do	.08				T.	.08		.20	.25	.16	.06		.05	T.		T.	T.		T.		.06	.04				.55	.05				1.58

TABLE 2.—*Daily precipitation for November, 1911. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Montana—Contd.																																
Chester	Marias				.12				.20				.10	.10	.52												.10	.10				1.24
Chinook	Milk																															
Clearcreek	do				.67		.10			.25			.15	.17					.31							.20	T.					1.85
Clemons	Missouri				.02		.01		.14	.15				.04	T.					.08			.04				.25					0.73
Clydepark	Yellowstone	.01		.02	.07	.04	.08		.12	.03	.15	T.		.01	.01	.05	.01	T.					.01				.04	.01				0.66
Conrad ‖	Marias								*	*	*	*	*	.04						.18											0.22
Copper	Missouri				T.	.03			.10	.16	.11	.01	T.				T.	T.	.06			T.	T.				.15	.05				0.67
Crow Agency	Bighorn				.03		.08			.18	.35						.05	.23	.02			.04					.05	.18				1.21
Culbertson	Missouri							T.					.40	.20	T.																	0.60
Cut Bank	Marias																															
Denton	Missouri					T.	.02		.03	.02	.05		.01	T.				T.		.20	.20		T.				.07	.02				0.62
Dillon	Jefferson					.11	.10	.20	.45	.15					.30	.45					T.						T.					1.76
Dirty Creek	Missouri	T.		T.			.18		.07	.19	.18		T.	.08				.24	.19	.34	.20	T.					.22	.02				1.01
Dry Creek	do				.04	.03	.07			.20	.20																					0.54
Dry Wolf Camp	do					.05	.10	.03	.30	.01								T.	.01	.02			.05				.03	T.				0.60
East Gallatin River	Gallatin	.02			.18	.14	.06		.12	.10		.06		T.		.31	.02	.10	.02	.02		.13					.27	T.				1.57
Ekalaka	Little Missouri																															
Elkhorn	Jefferson			T.	.06	.04	.30	.01	.03	.10	.15	.03		.17	T.	.06		.10	.03	T.		T.	.03				.08					1.19
Fallon	Yellowstone											.03		T.	.07																	0.19
Fish Creek	Jefferson					.16			.28	.50						.20					T.	T.		T.		.10	.03					1.27
Flathead Creek	Yellowstone			T.	T.	.12	.27	T.	.08	.09	.08	T.	T.			T.	T.	.06	.06								.13					0.89
Fort Benton	Missouri								.06	.12																	.12	.05				0.35
Fort Shaw	do							T.	.08	.04									.05	.12							.12					0.41
Foster	do						T.			.07	.02					T.		T.	.01	T.	.26	T.					.09	.05				0.50
Garneill	do	.15				.20				.30							.20			.30							.50					1.65
Glasgow	Milk									.25				*	*	.40																0.65
Glendive ‖	Yellowstone					.05	.03		.10	.20			.07		.20							T.	T.				T.	T.				0.65
Goldbutte	Marias				.20	.10	.04		.02				.03							.01	.01						.03					0.44
Graham	Powder					.02	.10			.02	.10	.01									.13	.02	.12				.08	.02				0.62
Grayling	Madison			.05	.04	.09		.07	.04	.17	.13			.22	T.	.06		.05	.04	T.		.06					.07					1.09
Great Falls	Missouri				.12		T.		.08	.14	.12									.18	.04		T.				.21					0.89
Half Way House	do						.34	.19	.20	.35	.17	.14															.14	.05				1.58
Harlowton	do									.03	.03		.03	.03		T.				.01	.35						T.					0.48
Havre	Milk				.07		.01	.04	.10	.10	T.		.31	.24	.04				.06	.06						.10	.06	T.				1.19
Helena	Missouri			T.	T.	T.	T.	T.	.17	.26	.09	T.	.02	T.	T.		T.	T.	T.	T.		T.	T.			T.	.10					0.64
Highwood	do				T.	.06	.05		.05	.06	.07									.40		T.					.90					1.59
Huntley	Yellowstone									.23										.20						.08	.06					0.57
Jones Canyon	Gallatin			.32	.32	.05	.05	.23	.32	.32	.31	.05				.32	.07	.02				.11					.15	.12				2.76
Jordan	Missouri									.10	.10				.40																	0.60
Knobles Ranch	Milk				.17		.05	.06		.06	T.		.18	T.	.05	T.				T.	T.						.17					0.74
Lewistown	Missouri	.06		.04			.03		.17	.20	.07		T.	T.		.09			T.	.20	.12		.09			.14		.08	.03			1.32
Lonetree	do									.08	.05							.05		.10	.05						.45					0.78
Malta	Milk				T.	T.			T.	.09	T.		T.	.19	.10				T.													0.38
Medicine Lake	Missouri								.02	.02	.02	.03		.02	.02					.03							.02					0.18
Melstone	do																															
Mildred	Yellowstone						T.				.01			.10	.10	T.			T.				T.				T.	T.				0.21
Miles City	do						.02		.16	.12	.24			.05	.04			.20	.10								.02	T.				0.55
Norris	Madison								.09	.08	.01	.04				.17	.11										.02	.01				0.53
Nye	Yellowstone	T.				T.				.05	.03	T.				.16	.25					.01					.25	.14				0.89
Olsen Creek	Jefferson	.01			.04	.22	.05			.04		.02	.03									.01						.13				0.55
Pipestone Pass	do	T.		T.	.02			.04	.35	.20	.10	T.		T.		T.						T.			.14		.02	T.				0.87
Poplar	Missouri								.05	T.					.10	.20												T.				0.35
Red Lodge	Yellowstone				.03					.27	.24	.06				.19	.18					.02				.25	.15					1.39
Renova	Jefferson				.04		.02		T.	.10	.05					T.	T.										.06					0.27
Ryegate	Missouri						T.			.20	.90									.33							T.					1.23
Seville	Marias								.60				.05	.05						.30	.30											1.30
Shelby	do						T.		T.	T.											T.	T.										T.
Sidney	Yellowstone	.05								.16	.01			.18	.18	.22		T.	T.									T.				0.80
Spokane Ranch	Missouri								.08	.13																	T.	T.				0.21
Springbrook	Yellowstone						.04			.47	.15	.15		.15	.32	.21							T.					.18	.04			1.71
Stearns	Missouri				.03	.03		*	*	*	.48			*	.30					.10						*	.29					1.23
Sunlit Farm	Milk				.01				.03									.06													0.10
Sun River Canyon	Missouri		.02						.29		.25				.02												.12					0.70
Three Forks	Madison								*	*	.25					.05																0.30
Tokna	Yellowstone						.04			.40	.10			.20	.20	T.																0.94
Trail Creek	do	.03		.10		.15			.30		.04					.20	.20						.12				.12	.02				1.38
Utica	Missouri								.12	.09										.30							.11					0.62
Valentine	do						.13							.19					T.	.06					.03		.02					0.43
Valier	Marias			T.			T.		.04	.03	.04		T.		.03					.17			T.				.03					0.34
Virginia City	Jefferson					T.			.07	.33	.08					.35	.40										.10					1.33
Wall Rock Mountain	Missouri			T.	.03	.04	.05	.02	.04	.21	.19			.04	.02		.06	.03									.28					1.01
Warm Springs Creek	Madison			T.	.28	.07		.02	.03	.15	.01	.03		.01		.16	.18					.07						.06				1.07
Wheaton	Missouri						T.			.15				.10						.30	.10											0.65
White Sulphur Spgs	do								.07	.13	.17																.13					0.50
Wilder	do									.14	.06			.20	.06					.17							T.	T.				0.63
Wolf Creek	do	T.				T.			.05		.11			.06	.08	T.											.12	.04				0.46
Woodville	Jefferson			T.	.03	.04	.15		.04	.12	.18		.03	.02	T.	.04											.19					0.84
North Dakota.																																
Alpine	Knife						.06	T.	.02		.15	T.	T.		.04	.02		T.	T.	.02			T.				T.	.02				0.33
Ashley	Missouri	.05									.28					.05	.20						.02				.02	T.				0.62
Beach	Little Missouri						.10	.02			.35			.08													.03	.05				0.63
Belfield	Heart																															
Berthold Agency	Missouri					0.8			T.	.01	.07	T.		.20	.02			T.	.10							T.		T.				0.48
Bismarck	do					T.	.03			.05	.41	.07		.03	.03	.02	T.	T.	.10	T.			T.				.02	.02	T.			0.78
Broncho	Knife									T.	.48												.02									0.50
Buford	Missouri					T.				.05		.10	.10		.10	.20											T.					0.55
Dickinson	Heart	.08					.07			.05	.07	T.		.06	.08	.07		.03		.02							T.	.03			T.	0.56
Edgeley	James											.20																				0.20
Epping	Missouri									.10				.10	.05					.05							.06	.05				0.41
Flasher	Cannon Ball																															
Fullerton	James						T.			.03	.19	.25			.11	T.	.40	T.	T.	T.							T.		T.			0.98
Garrison	Missour						.11			.02	.10				.10			.05		.20			.02					T.				0.60
Haley	Grand						.06			.11		.11			T.	.10	.03			T.			T.					T.				0.41
Hettinger	do					T.	T.			T.	.25					.15							T.		T.			T.				0.40
Howard	Missouri				T.		T.		.20	.20	.10				.20					.25							T.					0.95
Jamestown	James					.02	.25			.05	*	.35		.10	.05	.05			.05	.02							.06					0.90
Lamoine	Missouri																															
McHenry	James					.01				T.	.10	.10				.05	.02										T.					0.22
Marmarth	Little Missouri						.08			.01	.06				.01	.06			T.				T.					T.					0.28
Marstonmoor	James	T.				T.	T.	T.		T.	.60	.20		.20	T.	T.	T.	T.	T.	T.			T.				T.	T.				1.00

TABLE 2.—*Daily precipitation for November, 1911. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
North Dakota—Con.																																
Medora	Little Missouri						.01			.10	.50		.10	T.	T.	.45						T.						T.			1.16
Melville	James					.21					.30				T.		T.			T.			T.								0.51
Mott	Cannon Ball						.22			.18	.27			T.	.03	.27	.06	.12	.21				.03					.21	.02			1.62
Napoleon	Missouri					.18					.08	.20																.10				0.56
New England	Cannon Ball																															
New Rockford	James																															
New Salem	Heart	.03					.10			.10	.50	.05		.05	.40	.10		T.		.04			.10				T.	.04				1.51
Orange	Cannon Ball																															
Schafer	Little Missouri																															
Steele	Missouri																															
Washburn	do						T.			.10	.13	T.		T.		T.		T.										T.			0.23
Williston	do				T.		.01		.01	.76	.02	.01	.02	.14	.12	.03		.02	.02				T.				.07	.02	T.			1.25
South Dakota.																																
Aberdeen ‖	James	T.					.02				.10	.40				T.	.15	1.00	.05					T.			T.	T.				1.72
Academy	Missouri	.05					.01			T.		.08						.05	.08								.02	.05				0.34
Alexandria	James																															
Ardmore	Cheyenne																															
Armour	Missouri																															
Bellefourche	Cheyenne			T.		.25	.03			.03		.13					.50		.20		T.					T.	T.					1.14
Brookings	Big Sioux											.05				.05	.08		.05								.01					0.24
Camp Crook	Little Missouri						.07			T.	.20						T.		.15									.01				0.43
Canton	Big Sioux											T.																				T.
Cascade Springs	Cheyenne	.06								.04								.11		T.							.12					0.33
Castlewood	Big Sioux	.02		T.		T.	.01		.01	T.	.02	.05	T.			.04	.10	T.	T.	.03			T.				.04	.02	T.			0.34
Centerville	Missouri			.02	.01		T.	T.		T.		.15					T.	.02	*	.02	T.							.03	T.			0.25
Chamberlain	do																															
Clark	James	.10					.02	.03		.02	.10	.40				.10	.60		T.	.10			T.				.03	.04				1.54
Cottonwood	Missouri						.05			.05	.02	.10					.25			.25								T.	T.			0.72
Custer	Cheyenne									.40	.30							.40	.30													1.40
Daviston	Owl																															
Deadwood	Cheyenne				.05	.15				.10		.65					.65		.95	.02							.40	.85				3.82
Deerfield	do				.20	.21				.05	.03	.26					.18	.04	.33	.06	T.						.01	.01	.02		T.	1.40
De Smet	James																															
Dowling	Cheyenne	.05								.08	.02	.10	.02				.30	.80									T.	T.				1.37
Dumont	do							.18		.26		.92					.78	.31					T.				.91	.44	.08			3.88
Eagle Butte	Grand	T.				T.	T.			T.	.15	.20				.10	.10	T.					T.				.06	.06				0.67
Eales	Missouri	.04					.08			.10	.06	.25				.13	*	.26	.03	.10			T.				.02	.02	.01		T.	1.10
Edson	Cheyenne																															
Elk Mountain	do				.05					.05		.25					*	.36										.02				0.73
Englewood	do		.10	.40		.50				.20	.30			.10					.60	.80								.80	.30			4.10
Eureka	Missouri	T.					.04	.07			.22	.20				.05	.30						T.				T.	T.				0.88
Fairfax	do	.05										T.																.11				0.16
Faulkton	James						.02									.10	.28															0.40
Flandreau	Big Sioux												.02					.05		.08								.05				0.20
Forestburg	James	.15				T.	T.			.05		.10					T.	.05		.12							.17					0.64
Frederick	do					T.	.09				.75	1.50					1.50		.65	T.							T.	T.				4.49
Gannvalley	Missouri																															
Greenmont	Cheyenne					.35				.20	.05	.50					.48		1.10	.30							.45	.48				3.91
Greenwood	Missouri	.05					T.					.07						.05	.05									.05				0.27
Hardingrove	Cheyenne									.01		.10					.06															0.17
Hardy Ranger Station	do																															
Harveys Ranch	do	.10		.09		.06					.03	.83							.74								.35	.30				2.50
Hermosa	do				.05					.11	.07						.11		.07	.06							T.					0.47
Highmore	Missouri						.01			T.	T.	.15					.06	.07	.03	.03												0.35
Hopewell	Cheyenne	.05									.10	.40					.30										T.	T.				0.85
Howard	Missouri	.04		T.		T.	.04			T.	T.							T.		.02			T.				T.					0.14
Howell	James						.03			.01		.08					.03	.03	.10	T.	.01			T.				.01	T.				0.30
Huron	do						.03			.01	.02	.06					.04	.02	.02		.01			T.				.04	.01				0.26
Ipswich	do						T.				.20	.60					.60	T.										T.				1.40
Kadoka	White	.05					T.			T.	T.	.13					T.										T.	T.	T.			0.18
Kennebec	Missouri									.10		.30								.05							.10	.10				0.65
Kidder	James						T.	T.	T.	.10	T.	.70		T.	T.	57	.11	.21	T.	.07		T.					.05	T.	T.			1.81
Kimball	Missouri						.03												.03	.02		T.					.08	.05				0.21
Lacreek	White	.15								.25		*	.65						.25									*	.22			1.52
La Delle	James	.05				T.	T.				T.	.05	T.			T.	.12	.15	.08				T.				.05	T.				0.50
Lead	Cheyenne	.08			.15	.10				.05		.35					.43		.74	.10	.09						.26	.22	.10			2.67
Lemmon	Grand				.12	.05	.11			.10	.20				.30		.15	.05									.05	.05				1.18
Manderson	White	.01										.03							.07	T.	T.	.03					.14		.05			0.33
Marion	Missouri	.17		T.			T.			T.	T.	T.	T.				T.	T.	T.	.10							.07	T.	T.			0.34
Marston	do	T.								T.		.25					.10	.20										T.				0.55
Mellette	James						T.	.10	T.	.02	.02	.44				.02	.42	T.	T.	.04			T.				.07	T.				1.13
Menno	do			.01			T.					.05					.07		.05									.09				0.27
Milbank ‖	Minnesota						T.	.03			T.	.09	.06		.04			.90	.04	.08								.04				1.28
Mitchell ‖	James											T.								.04							.02	T.				0.06
Mobridge	Missouri						T.			T.	.40				.15		.30	.10							T.							0.95
Murdo	White									T.		.60						.20									.10					0.90
Oelrichs	Cheyenne	.05										T.						.15									.35					0.55
Onaka	James						.08	T.		T.	.15				.10	.12	.30	T.	.05		T.	T.	.05				T.	.03			.01	0.89
Orman	Cheyenne					.27	T.			.01	.04	.15				T.	.35		.13		T.						T.	T.				0.95
Ottumwa	Missouri						T.			.10	T.	.60					.30										T.	.10				1.10
Parkston	James				T.							.18	.11					.29									.18	.03				0.79
Pierre	Missouri						T.			.02	.06	.20				.01	.18		T.								T.	T.				0.47
Plankinton	James						T.				T.	.10						.15	.34								.06					0.65
Pollock ‖	Missouri					.06	.10				.20	.10			T.	.07	.20	T.		.06			T.				.02	.05				0.86
Rapid City	Cheyenne	T.				.26				.08	.34	.11		T.		T.	.37		.11	.07							.02	.04				1.40
Redfield ‖	James												.25			.05		.09														0.39
Rochford	Cheyenne					.20	.05				.05	T.	.40				.20	.05	.40	.10	.05						.08	.08	.12			1.78
Rosebud	White	.10					T.				.05	.05	.30					.30	.10	T.							.10	.10	.05			1.15
Rosebud Agency	do																															
Roslyn	Big Sioux								T.	T.	T.	.35				T.	.40	.10					.02	T.			.08	.10				1.05
Selby	Missouri		.02				.10			.09		.12					.54			.12												0.99
Sioux Falls	Big Sioux	.06		.02		T.	T.				T.	1.00			T.	.05	.10	T.		.08								.12	T.			1.43
Sorum	Owl					.10				.02	.10	.15				T.	.05						T.				T.	T.				0.42
Spearfish	Cheyenne					.50				.30	.80	T.					.20		.25	.10						.30	.20					2.65
Stephan	Missouri	T.					.04			T.	T.		.25				.05	T.	.10	T.			T.				.05	.05				0.54
Tama	Cheyenne	T.					T.	T.		.05	.35				T.	T.	.30	T.	.02				T.				.02	T.				0.74
Timber Lake	Grand	T.				.01	.02			.04	.14	.10				.13	.26	T.		T.							T.	.14				0.84
Tyndall	Missouri	T.					T.					T.	.03					T.	.34								T.	.05	T.			0.42
Vale	Cheyenne					.40	T.				.05						.51		.10								.02	T.				1.08

TABLE 2.—*Daily precipitation for November, 1911. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																												Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
South Dakota—Con.																																
Vermilion	Missouri	T.				.36	.01			.05	T.	T.	T.				T.	T.	.02									T.				0.02
Waters Ranch	Cheyenne										.12	.24					.63		.38		.10						.10	.07				2.06
Watertown ‖	Big Sioux	T.			T.		T.		T.		T.	T.	.15			T.	*	.70		.08		T.					*	.03				0.96
Wentworth	do	T.		T.		T.				T.		.07						T.		.09							.02	.04				0.22
Wessington Springs	James																															
White Lake	Missouri																		T.								T.					T.
Yankton	do	.09		T.		T.	.01				.05						T.	.03	.09	T.			T.				.05	T.				0.32
Minnesota.																																
Pipestone	Big Sioux						T.					T.				T.	T.	T.	T.													T.
Colorado.																																
Akron	Republican		.02							T.		.02					.06										.10					0.20
Albion Lake	South Platte																															
Arriba (near)	Republican	T.	.01							.02		.13						.04					T.				T.	T.	T.			0.20
Auldhurst	South Platte	.06		.02		.06			T.	T.		.10						T.					.08	.10			T.	.10				0.52
Bennett (near)	do																															
Boulder	do	.18	.05				.01					.30											.17	.01			T.					0.72
Burlington	Republican		.08									.05						.07										T.				0.20
Cassells	South Platte	.15	T.			T.				T.	.13												.05				*	.10	.02			0.45
Castle Rock	do	.05											.15				.10											.23				0.53
Cheesman	do	.08				T.			T.	T.		.08						T.					.25	T.			.20	.20				0.81
Cheyenne Wells	Smoky Hill	T.	.25			T.						T.																T.				0.25
Cope	Republican			.31								.12															.10	.06				0.59
Corona ‖	South Platte	.14	.55	.07			.52		.28	.44	.36	.52	.50		.18		T.	.58	.27	.06			.06	.52				.50				5.55
Denver	do	.03	.01			T.			T.			.09											.20				.04	T.				0.37
Edgewater	do	*	.15																								.08					0.23
Estes Park Fish Hatchery.	do	.20	.12				.20		T.	.10		.15	T.				T.	.10	T.				.36				T.					1.23
Fort Collins	do	.05	.06			.03	T.					.22											.06				.01					0.43
Fort Lupton	do																															
Fort Morgan	do											.05															T.					0.05
Frances	do	.25	.12			T.	.37		.20	.19	.03	.38	.50		.04		.04		.28	T.			.35					.32				3.07
Frys Ranch	do	.04	T.				.04		.04	.08		.24					T.						.09				T.					0.53
Georgetown ‖	do	.02				T.	.03	.04	.08	.02	.20	T.					.03						.14				.04					0.60
Greeley	do	T.				.05						.32										T.						T.				0.37
Grover	do																															
Hartsel	do																															
Hawthorne	do	.44	.06				T.					.25											.14				.17	.05				1.11
Holyoke (near)	Republican																										T.	T.				T.
Idaho Springs	South Platte	.05				T.	.02		.03	T.		.12											.08	.02				.20				0.52
Keota	do		.03									.20																				0.23
Laporte	do	.15	.07									.15											.03					.01				0.41
Leroy (near)	Republican																															
Longmont	South Platte	.07									.31											.01										0.39
Longs Peak (near)	do	.40	.05				.05		.13	.13	.05	.33											.83				.05	.05				2.07
Lulu Pass	do																															
Moraine Park	do		.20							*	.50												.20									0.90
Platte Canon	do	T.											.02										.02				T.	.03				0.07
Saint Cloud	do	.10					.10		T.	T.		.10					.15					.05					T.					0.50
Sedgwick	do		T.									.03	.02																			0.05
Sill Mine	do	.08	.15	T.		T.	.35		.10	.20	.25	.75			.06		.10	.40					.17				.08	.05				2.74
Spicer	North Platte					.23	T.	.20		.12	.09	.21					T.	T.	.12				.20									1.17
Sterling	South Platte											.05											T.				T.					0.05
Waterdale	do	.25				.04	.02					.26											.12									0.69
Wray	Republican											T.					.13										.10	T.				0.23
Yuma	do		T.							.06	T.	T.					T.										T.	T.	T.			0.06
Nebraska.																																
Ainsworth	Niobrara	.01				T.				T.		.05						.02	.02								T.	.09				0.19
Albion	Loup			.04		.52						T.									T.							.10	T.			0.66
Alliance	North Platte	T.										T.					T.											.05	.05			0.10
Alma	Republican		.07				.09					T.																T.				0.16
Arcadia	Loup					T.					T.	.10					T.											T.				0.10
Arden	do																			.02							T.	T.	T.			0.02
Ashland	Platte	T.				.03	.02			.03		.02	.04					.01	.01														0.16
Ashton	Loup	T.	T.	T.		.07						.02						T.										T.				0.09
Atkinson ‖	Elkhorn	T.											T.					T.	T.										.20			0.20
Auburn	Missouri	T.		T.		.11	.39					T.	T.					T.	.05										T.			0.55
Aurora	Blue					.10							.12															.05				0.27
Beatrice	do	T.				.22	.28					T.						.05	.05													0.60
Beaver City	Republican	T.	.07									.04						.05														0.16
Bellevue	Missouri	.05		T.		T.	.29					.05							.17					.02								0.58
Benkelman	Republican	.04																														0.04
Bertrand ‖	do		T.										.10					T.														0.10
Blair	Missouri	.03		T.		.01	.01					.01					T.		.14														0.20
Bloomfield	do	.10				T.	.01					.05						T.	.30									.10					0.56
Bradshaw ‖	Blue	.20				.02						T.																T.				0.22
Bridgeport	North Platte		T.				T.					T.															T.	.10				0.10
Broken Bow ‖	Loup	T.				T.						T.					T.											T.				T.
Bruning	Blue	.13		T.			.14					T.						.01										T.				0.28
Burge	Niobrara										T.	T.	T.		T.												T.	T.				T.
Butte	do	T.				T.	T.					.08						T.	T.								T.					0.08
Cairo	Platte																															
Callaway	Loup	T.																										.05				0.05
Cambridge	Republican	T.	T.			T.						T.						.10														0.10
Canton (near)	North Platte	T.					T.					.15						T.											.30			0.45
Columbus ‖	Loup					.20							T.								T.											0.20
Cozad	Platte		T.			T.						T.						T.										T.				T.
Creighton	Missouri																															
Crete	Blue					.02						.05																				0.07
Culbertson ‖	Republican	T.	T.				T.																									T.
Curtis	do																															
David City	Blue	.05		T.			.09					T.						T.	.04									T.				0.18
Dawson	Missouri																															
Du Bois	do	.03		.02		.30	.25	.01				.02						.02					.02									0.67
Dumas	Loup																															
Ellis	Blue																															
Elm Creek ‖	Platte							T.																	T.							T.

TABLE 2.—*Daily precipitation for November, 1911. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Nebraska—Contd.																														
Elsie ‖	Republican					.01							.02														.04					0.07
Ericson	Loup	.01										.05																.02				0.08
Ewing ‖	Elkhorn											.20																.30				0.50
Fairbury	Blue		T.			.37					T.	.03					.03									T.	T.					0.43
Fairmont ‖	....do	.15		T.			T.					T.	T.					.07										T.				0.22
Fort Robinson ‖	White											.02						.01	.05								.10					0.18
Franklin	Republican		T.			.15						T.					T.										T.					0.15
Fremont	Platte	T.					.05					T.							.10													0.15
Fullerton	Loup	.04				.51						T.															T.					0.55
Geneva	Blue						T.					.05						.03									T.					0.08
Genoa	Loup	.04		T.		.02	.15			T.		T.	T.					T.	T.								T.	T.				0.21
Gordon	Niobrara						.40													.07												0.47
Gosper	Republican		.02			.05						.01						T.														0.08
Gothenburg	Platte	T.				T.						T.															T.					T.
Grand Island ‖	....do	T.																.02														0.02
Grant	Republican		T.			T.						.05					.05										.10					0.20
Greeley	Loup	.10	.02	T.		.13						.05							T.		.02						.02					0.34
Guide Rock	Republican	.10	T.									.05																				0.15
Halsey	Loup	T.								T.		.03					T.										.02					0.05
Hartington	Missouri	.10				T.					T.		.10				T.	T.	.25									.10	T.				0.55
Harvard	Blue																															
Hastings ‖	....do			T.	T.	T.	.10					.10	.05					.05														0.30
Hayes Center	Republican		.05			.05						.05					.03									.05	.05					0.28
Hay Springs	White											.10					.10	.40		.05						.20	.20					1.05
Hebron	Blue	.15				.08						T.						.02										T.				0.25
Hemingford ‖	Niobrara	.02										.06	.02						.05								.08	.02				0.25
Hendley ‖	Republican																.10															0.10
Hershey ‖	South Platte		T.			T.	.02																			T.						0.02
Hillside	North Platte	T.	T.	T.		.02				T.		.09					T.	.01	.02							.02	.03	T.				0.19
Holdrege ‖	Republican	T.										T.	.02					.02														0.04
Hooper	Elkhorn	.10																T.	.20								T.					0.30
Hull (near)	North Platte																				.40											0.40
Imperial	Republican	T.	T.			T.	T.					T.					.05									*	.05					0.10
Kearney	Platte																															
Kimball	South Platte	T.					T.					.05															.20					0.25
Kirkwood	Niobrara	T.					T.												T.								T.					T.
Kowanda ‖	North Platte																										T.					T.
Lamar	Republican		T.									.05															.05	T.				0.10
Lexington	Platte		T.										T.																			T.
Lincoln	....do	T.		T.		.01	T.				T.	T.					T.	.02	.02									T.	T.			0.05
Lodgepole	South Platte												T.													T.	.20					0.20
Loup City	Loup		T.			.10						T.						T.														0.10
Loyal	....do	T.	T.																													T.
McCook	Republican					T.						T.					.05															0.05
McCool Junction ‖	Blue											T.					T.									T.						T.
Madison	Elkhorn	.05		T.		T.	.56		T.	T.	T.	T.	T.					T.	T.									.10				0.71
Marquette	Blue	T.			.22							.05						.05									T.					0.32
Mary	Loup						.02			T.		T.					T.	T.	T.							T.	.05					0.07
Mason City ‖	....do																															
Minatare	North Platte											.05															.03					0.08
Minden	Blue		.01		.06	.12						.02						.02										T.				0.23
Mitchell	North Platte							T.				.07															.03					0.10
Mullen	Loup																															
Nebraska City	Missouri	.10				.75												.10	.15													1.10
Nelson	Blue	.15					.12					.02						.01														0.30
Norfolk	Elkhorn					T.	.60					.03					T.	T.	.08					T.				.08	.02			0.81
North Loup	Loup			.02		.30					T.	.02																.02				0.36
North Platte	Platte					.02						.02																				0.04
Oakdale	Elkhorn	.02		T.		.22				T.		.05						T.	T.								.07	.03				0.39
Omaha	Missouri	.01		T.		.14	.02			T.	T.	.05						.02	.16		T.			T.				T.	.02			0.42
Ord	Loup																															
Orleans ‖	Republican																															0.00
Osceola	Blue																															
Palisade	Republican									T.						T.																T.
Palmyra	Missouri						.28					T.						T.	T.													0.28
Pawnee City	....do					.70						T.	T.					T.	T.													0.70
Paxton	South Platte		T.			T.				T.		.05					T.		.08							T.	T.	T.				0.13
Plymouth ‖	Blue	.15			.02	.32		.01				.02																				0.52
Purdum	Loup	T.	T.				T.			T.		T.						.05		T.	.03					*	.05					0.13
Ravenna	....do	.10	T.	T.		.19						.05						.02		T.							T.					0.36
Red Cloud	Republican	.10	T.	T.		.01	.06			.02	.02	.01						T.	T.								T.	T.				0.22
St. Libory	Platte	.05					.18					T.														T.						0.23
St. Paul	Loup	.05				T.	.12					T.																				0.17
Santee	Missouri																		.60									T.				0.60
Sargent ‖	Loup					T.																						T.				T.
Schuyler	Platte	T.		T.								T.							T.									T.				T.
Scottsbluff	North Platte	T.					T.			T.		.02														.01	T.					0.03
Seward	Blue										T.	T.					.10										T.					0.10
Sidney	South Platte		.01									.10					.06									.10	.01					0.28
Springview	Niobrara ‡																															0.50
Stanton	Elkhorn	.10					.60				T.								.10								.05					0.85
Stratton ‖	Republican											T.	T.																			T.
Superior ‖	....do																															
Syracuse	Missouri	T.		T.		.46				T.		T.						T.	.09													0.55
Table Rock	....do	.03			.48	.17						.04						.05	.05													0.82
Tecumseh	....do		T.		T.		.42						T.							T.												0.42
Tekamah	....do	.02					.08					T.							.03													0.13
Tobias	Blue																															
University Farm	Platte					.07	.05											.04														0.16
Valentine	Niobrara	.03					T.			T.		T.					.01		T.	T.						T.	T.	.01				0.05
Wahoo	Platte					.10																										0.10
Wakefield	Elkhorn	.05					.50					T.							.30								.08					0.93
Walthill ‖	Missouri	T.					.25				T.	T.	.03							T.				T.			T.					0.28
Watertown	Platte	.01																									T.					0.01
Wauneta	Republican																															0.00
Weeping Water	Missouri	T.		T.		.01	.23					.02						.01	T.										T.			0.27
Westpoint	Elkhorn	T.	.20																													0.20
Wisner	....do	.10					.23											.13														0.46
York	Blue	.08		T.			.08	T.		T.		.05						.05	T.									.03				0.29

TABLE 2.—*Daily precipitation for November, 1911. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Iowa.																																
Afton	Grand	T.				T.	.53		.11	.30		T.	T.					T.	T.	T.				T.				T.			0.94
Allerton	Chariton					.05	.53		.07	.51		.20						.11					.31					.03	.17			1.98
Alton	Floyd	.10				T.	.18	.03																								
Atlantic	Nishnabotna	T.		T.		T.	.32		T.	.05		T.					.11	T.	.05				T.					T.			0.53
Audubon	do	.05				.04	.44			.06		T.					.10		T.												0.70
Bedford	Missouri	T.		T.		.14	.53		.05	.15		T.	.02					.47	.09					T.				T.			1.45
Centerville	Chariton	T.				.12	.40		.05	.70	.03	1.00					.50	T.			T.		.50	T.			T.	.04			3.34
Chariton	do	T.				T.	.40		T.	.55		T.						T.	T.	T.			.10	T.			.10	.15			1.30
Clarinda	Nodaway	T.					.55			.05			T.					.38	T	.11			T.					T.			1.09
Corning	do	T.					.50		*	.27		T.						T.	T.									T.			0.77
Corydon	Chariton					T.	.58		T.	.48	T.							.25	T.				.25	T			.10	.17			
Council Bluffs	Missouri	.10		T.	T.	T.	.30			T.		T.	T.					T.	.20					T.				T.			0.60
Creston	do	T.					.57			.22		T.						.38	T	.06									T.	T.		1.23
Cumberland	Nodaway						.46					T.							.05												0.51
Denison	Missouri			T.								.12						.25	T.					T.			T.				0.37
Elliott	Nishnabotna																															
Greenfield	Nodaway	T.				T.	.45		T.	.20		T.						.32	.05					T.				T.			1.02
Harlan	Nishnabotna	.01		T.	T.	.10	.12		T.	T.		.05	T.				T.	.04	T.					T.			T.	T.			0.32
Inwood	Big Sioux	.04		.05		T.	.04					.04	T.				T.	T.	T.	T.							.02	T.			0.19
Lamoni	Grand	T.				.05	.30		.15	.06		T.						.20	T.	.02			.10	T.			.10				1.00
Larrabee	Little Sioux																															
Le Mars	Floyd	T.		T.			.25	.04				T.	.01				T.	.02	T.								.10				0.42
Lenox	Missouri					.10	.57		.05	.20		.01						.52	.02					T.				T.			1.47
Leon	Grand	T.		T.		.05	.30			.50	T.	.10	T.				.10	.05	T.	.03			.20	T.			T.	.04			1.57
Little Sioux	Little Sioux	.07										.05							.05												0.17
Logan	Missouri	.03		T.								.10						.05	.05					T.			T.	T.			0.23
Mount Ayr	Grand					.05	.45		.20			.15						.88	.05				.13	T.			T.	T.			1.91
Murray	do	T.					.45		.15	.31		.04						.42	.02				T.	T.			T.	T.			1.39
Northboro	Missouri	T.				.18	.25		T.	T.		T.						.02	.15												0.60
Odebolt	Little Sioux											.05					.06														0.11
Onawa	Missouri	.06		T.			.05					.05						T.	.04					.02							0.22
Pacific Junction	do	T.	T.	T.		.02						T.						T.	.13								T.	T.			0.15
Rock Rapids	Big Sioux			T.	T.	T.	T.					.05	T.		T.	T.	T.			.12							.05	T.			0.22
Sheldon	Floyd	.10		.05	.02	.05	.20				T.	.10	T.				.20	.05	T.	.05							.05			.20	1.07
Sibley	Big Sioux	T.		T.	.07		.18	.05				T.	T.	T.		T.		.12	T.	.10				T.			T.	T.			0.52
Sioux Center	Floyd	.10										T.					T.										.10				0.20
Sioux City	Missouri			T.		.36	.01			.01		.05					T.	.01	.03					T.		.06	.06	.03			0.62
Spencer	Little Sioux																			.20												
Thurman	Missouri	.01		T.		.10	.31					.05	T.					.01	.05					T.			T.	T.			0.53
Washta	Little Sioux	.05		T.			.12			T.		T.					T.	T.										T.			0.17
Woodburn	Chariton	T.		T.		.05	.45		.16	15	T.	.05					T.	.30	.01				T.	T.			T.	T.			1.17
Kansas.																																
Abilene	Smoky Hill			.06			.66					T.																			0.72
Agricultural College	Kansas	T.		.02		.03	1.00					T.						T.	T.				T.					T.			1.05
Alton	Solomon	T.	.03	T.		.16	.03					T.															T.	T.			0.22
Atchison	Missouri	T.		T.		.22	.52		.07	T.		.05						.10	T.				.21				.10	T.			1.27
Beloit	Solomon	T.	T.				.17					T.							T.								T.	T.			0.17
Blakeman	Republican	T.	.03			.02						.04						.05									.03				0.17
Blue Rapids	Blue	T.		T.		T.	.70						T.																		0.70
Centralia	do	T.		.01		.33	.35			T.			T.						T.				.13					T.	T.		0.82
Chapman	Smoky Hill	.25		T.			.80					T.																			1.05
Clay Center	Republican			.05		.72						T.					T.														0.77
Colby	do	.01	.01			.01						.01					.01										.01				0.06
Concordia	do	T.	T.	T.		.45						.01						T.	T.								T.				0.46
Densmore	Solomon	T.	.05									T.						T.													0.05
Dresden	Republican	T.	.12			T.						T.						.03									T.				0.15
Ellsworth	Smoky Hill	.24	T.	T.		.50	.10					T.	T.						T.								T.	T.			0.84
Enterprise	do	.09		.04		.30	.50																				T.				0.93
Eskridge	Osage	T.		.10		.35	.30					.03						.10	.01								.03				0.92
Farnsworth	Smoky Hill	.14	.30															T.									.02	T.			0.46
Fort Scott	Osage			T.		.60	.05			.01		.50						.30					.55				.10				2.11
Frankfort	Blue	T.		.02			.77						T.	T.				T.					.25								1.04
Garnett	Osage					.50	.25					.08											.10				.20				1.13
Goodland	Republican	.20								T.								.20									.10	.10			0.60
Gove	Smoky Hill					.08																									0.08
Hanover	Blue	.05		.02		.35	.13					.02						T.										T.			0.57
Harrison	Republican	.09		T.		T.	.12					T.						T.									T.				0.21
Hays	Smoky Hill	.14	T.			T.						T.																			0.14
Hill City	Solomon		.20		T.							.08															T.	T.			0.28
Horton	Kansas	T.		T.		.18	.42		T.			T.						.35	T.				.10	T.			T.	T.			1.05
Hoxie	Solomon	T.	.05									T.															T.				0.05
Jewell	Republican	T.		T.		.33						T.							T.												0.33
Lawrence	Kansas					.43	.23			.03	T.	T.			T.		T.	.43					.49				.40				2.01
Leavenworth	Missouri	T.		T.		.66			.07	T.		T.											.08	T.			.03				0.84
Lebanon	Solomon	T.	T.				.12					T.															T.				0.12
Leoti	Smoky Hill	T.	.23									T.															.10				0.33
Lindsborg	do	.18					.75																				T.	T.			0.93
McCracken	do	.50	.05			.01																									0.56
Mankato	Republican		.01	T.		.01	.03					.01	.01				.02														0.09
Minneapolis	Solomon	.25		.05		.57						T.																			0.87
Moran	Osage			T.		.09	.08					T.	T.					.50	T.				.15	.31			.10	.20			2.03
Natoma	Saline										T.																	T.			T.
Norton	Republican	T.	.50			T.						T.						T.									T.	T.			0.50
Oberlin	do	T.	.05			T.	T.					.08						.08									.03				0.24
Oketo	Blue	.01		.02		.62	.12					.04						.02									T.	T.			0.83
Olathe	Kansas			.01		.66			T.	.10		.02			.01			.28					.19				.50				1.77
Osage City	Osage	T.		.03		.42	.44		T.		T.	T.															.26	T.			1.15
Ottawa	do																															
Phillipsburg	Solomon			.05		.04	.03																									0.12
Plainville	Saline	.10	.05			T.						.02															T.				0.17
Pleasonton	Osage					.46	.29			T.		T.	.05					.35					.43	.05			.18	T.			1.81
Republic	Republican	T.					.25					T.						T.													0.25
Russell	Smoky Hill	T.	T.			T.																									T.
Russell Springs	do			.05		T.						T.															.02				0.07
Saint Francis	Republican	.01	.01									T.						.11									.03				0.16
Salina	Smoky Hill	.21	T.	.02		.40	.35			T.		T.							T.				T.				T.	T.			0.98
Scott	do	.24	.58									T.															T.	T.			0.82
Smith Center	Solomon		T.								.05																				0.05
Topeka	Kansas	T.		.03		.54	.11		T.			.02					.10	T.	T.				.03				.13	T.			0.96

TABLE 2.—*Daily precipitation for November, 1911. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Kansas—Continued.																																
Valley Falls	Kansas	T.		.05		.22	.50			.10		.10						.22					.08					.10				1.37
Vinland	do.			.05		.09			.06			.05						.23					.33					.40				1.81
Wakeeney	Smoky Hill		.07									T.																T.				0.07
Wallace	do.	T.	.09									T.																T.				0.09
Wamego	Kansas			.10		.30	.75					.10						T.					.05						T.			1.30
Missouri.																																
Amoret	Osage			T.		.71			T.	T.		T.						.31	T.				.40	.08				T.				1.50
Appleton City	do.						.67					.50						.33					.48					.26	.10			2.34
Arthur	do.					.48	.17					.32						.20					.58					T.				1.75
Avalon	Grand					.20	.55		T.	.15		1.20											.70						.10			2.90
Bethany	do.								.47	.56		T.						.28	T.									.02			1.33
Bolivar	Osage					.80						.20						.14					1.79					.25				3.18
Boonville ‖	Missouri						.86						.28			T.		1.06						.38					.20	.03		2.81
Brunswick ‖	Grand						.87			.21	.03		.42					.35						.50					.10			2.48
Clinton	Osage					.62	1.10					.31						.22				.25						.60	T.			3.10
Columbia	Missouri					.75	.26		T.			.44			T.		T.	.30	.04				.34	T.				.15	.15			2.49
Conception	do.	T.		T.		.15	.24		T.	T.		.02						.67	.05				.05	T.				.05				1.23
Crocker	Gasconade					.73						.83						1.23					1.27					.57				4.63
Eldorado Springs	Osage					.70	T.					T.	T.										1.14	.45				T.	.10			2.39
Fayette	Missouri					.65	.40		T.			.69	.20					.35					.32					.15				2.76
Fulton	do.					.71						.60			.20			.40		.06				.45					.03			2.45
Glasgow ‖	do.						.94			.02			.54					.16	.01					.46					.12	.10		2.35
Grant City	Grand			T.		T.	.42		.05	.06		T.	.15					.55	.15				.09	T.				T.	T.			1.47
Harrisonville ‖	Osage						1.11			.03			.04		T.			.09						.60					.04			1.91
Hazelhurst	Grand				.31	.30			.10	.16		.05							.17				.43					.10	.05			1.67
Hermann ‖	Missouri						.66				T.		.71					.17	.05	.02	T.			.46	T.				.36	.01		2.44
Houston	Gasconade				T.	.47	.20			T.		T.	.50					.22		T.			T.	.45				.11	.05			2.00
Jefferson City ‖	Missouri						.72				.02		.07					.22		.01				.34					.15	06		2.19
Kansas City	do.					.52	.09		.10	.01		.06			.01			.51					.51					.36				2.17
Kidder ‖	Grand						.52		.10			.08						.07					.32						.18			1.27
Lamonte	Missouri											.45	T.					.54	T.				.35	.08				T.	.10			1.52
Lebanon	Osage					.64	.11					.60						1.34					.60	.25					.30			3.84
Lexington ‖	Missouri						.98			.02			.50	.02				.65						.48					.07			2.22
Liberty	do.					.20	.65		T.	.07		T.	.05						T.				.25	T.				.20	.20			1.62
Lockwood	Osage					.93						.22											1.39	.10				.45				3.09
Marshall	Missouri					.43	.68		T.	T.		.10			T.			.55	T.				.68	T.					.05			2.49
Maryville ‖	do.			T.			.64			.04								T.		.34			.13						T.			1.15
Mount Vernon	Osage					.87	.04					.45					T.	.30					.48					T.	.45			2.59
Nevada	do.					.62	.14					.44			T.			.22					.98	.19								2.59
Oregon	Missouri	T.		.01			.35		.02	T.		.05						.35	T.					T.				T.	T.			0.78
Pattonsburg ‖	Grand					.66			.30			T.					.40			T.		.42						.03			1.81
Rolla	Gasconade					.57	.13			T.		.90	.10		T.			.09		T.			.52	.50	T.			.18	.07			3.06
Saint Charles	Missouri						.22						.05		T.									T.						.10		0.37
Saint Joseph	do.	T.		T.		.41	.28		.01			.03			T.		.23	T.	T.				.42	T.				.18	T.			1.56
Saint Louis (1)	Mississippi					.83	.12			T.		.97			T.			.46	T.	.01			.46	.12	.01			.38	.07	.01		3.44
Saint Louis (2)	do.					.40	.45			T.		.50	.35		T.			.75		.02			.10	.50	.01			.27	.40	.01		3.76
Sublett	Chariton	T.				T.	.50	.20		1.00	T.	.40						.50					.10	T.					.05			2.75
Trenton	Grand					.46			.33	.08		.04			T.		.12	.02	.06				.25					.18	T.			1.54
Unionville ‖	Chariton						.76			.72	.20		.35					.24		T.				.22					.70	.20		3.39
Warrensburg	Missouri					.40	.47			T.		.14			T.				T.				.21	.06				T.	.13			1.41
Warrenton ‖	do.						.72	T.					.70					.36	.08	.01				.32					.27	.02		2.48
Warsaw	Osage					.88	.34			T.		.18	.13					.32		T.			1.27	.26				.16	.05			3.59
Wheatland	do.					.85	.05					.20						.70					1.30	.22		.80	.30					4.42

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for selected stations for November, 1911. District No. 6, Missouri Valley.*

Date.	Wyoming.																Montana.											
	Basin.		Cheyenne.		Fort Laramie.		Lander.		Newcastle.		Pathfinder.		Sheridan.		Yellowstone Park.		Billings.		Dillon.		Havre.		Helena.		Lewistown.		Malta.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	60	28	20	9	27	11	26	13	26	2	40	7	30	0	29	9	27	− 6	56	14	34	6	36	16	21	1	24	− 5
2....	43	2	22	9	43	13	38	9	30	11	46	21	43	5	40	3	43	0	54	15	40	8	41	15	21	2	37	1
3....	41	8	49	15	53	10	53	13	42	15	48	28	52	15	41	20	52	22	52	13	54	29	39	24	56	11	55	13
4....	46	11	52	27	59	13	46	23	52	26	46	27	46	26	38	26	57	27	57	18	43	34	45	31	44	19	44	25
5....	50	17	42	27	48	29	45	26	42	30	43	29	45	28	34	17	51	24	55	24	46	29	42	32	48	19	49	28
6....	56	21	40	23	47	34	42	22	41	24	39	30	43	22	36	23	50	30	60	24	43	32	40	32	49	29	44	29
7....	60	20	51	21	56	12	45	16	45	20	44	22	46	19	34	23	57	19	50	12	37	16	48	31	45	24	38	22
8....	48	16	46	31	55	33	48	20	45	24	44	25	50	16	36	22	40	20	38	2	16	− 2	41	− 1	37	4	33	7
9....	52	26	46	26	53	20	39	25	30	10	38	21	18	− 1	30	1	2	− 7	31	− 2	1	−16	2	− 5	4	−16	5	− 2
10....	46	− 8	55	1	63	18	47	− 1	40	0	50	19	3	− 7	22	−15	− 3	− 7	16	−21	− 4	−17	− 4	−10	− 4	−24	2	− 17
11....	32	− 24	4	− 9	9	− 5	3	− 14	24	− 18	35	− 14	0	−14	0	−15	− 10	−18	29	−12	3	−16	− 2	−14	5	−20	1	− 21
12....	36	− 5	35	3	45	− 11	28	− 12	26	− 19	20	− 20	17	−15	20	− 3	14	−10	42	− 9	5	−13	24	−11	34	2	4	− 19
13....	36	0	52	28	54	4	45	13	41	10	34	16	29	16	28	18	15	8	44	18	5	− 1	25	10	10	− 5	4	− 3
14....	47	11	42	32	53	17	50	24	49	21	35	21	51	16	35	25	20	− 1	48	22	3	− 4	48	15	30	0	4	− 5
15....	50	23	56	32	51	42	54	34	41	26	48	28	39	25	36	25	42	10	45	22	13	− 8	38	28	41	19	6	− 17
16....	51	26	48	24	46	25	37	10	41	24	47	25	33	8	28	14	45	23	46	26	32	− 6	39	28	39	19	15	− 12
17....	58	24	40	21	48	14	47	8	31	10	37	5	44	6	34	20	52	15	44	27	38	18	44	30	40	27	35	− 5
18....	59	26	45	33	54	27	44	21	33	28	38	23	51	35	34	24	45	38	50	24	45	18	49	40	45	29	47	21
19....	66	21	52	41	59	33	56	25	33	28	47	33	51	32	39	33	38	32	52	25	38	32	47	38	41	24	44	26
20....	60	18	57	32	59	19	57	25	45	24	50	13	35	25	43	25	35	25	56	25	37	25	47	31	35	19	40	22
21....	56	17	55	31	63	21	53	23	51	28	51	35	50	23	36	17	48	22	62	18	42	20	44	33	56	18	42	15
22....	54	10	32	15	59	30	33	16	36	20	42	24	36	17	32	11	52	30	62	17	30	14	40	28	40	21	34	16
23....	48	0	41	13	50	11	40	11	34	20	34	10	45	13	27	5	45	17	60	19	39	10	39	22	43	19	34	5
24....	39	− 6	42	25	50	22	47	17	40	21	40	21	48	22	29	8	48	27	63	19	46	23	47	30	49	12	46	22
25....	45	− 1	49	25	58	14	50	18	48	22	44	25	58	22	35	13	52	34	61	16	46	30	50	30	45	19	46	22
26....	46	− 6	41	17	44	37	37	18	32	26	40	10	50	22	30	12	37	26	64	18	30	20	35	14	45	22	37	18
27....	44	8	17	4	22	11	23	− 1	24	8	40	8	22	17	16	− 8	28	12	55	17	22	6	27	9	35	18	22	11
28....	40	− 10	17	3	30	10	19	− 8	24	2	17	− 6	30	− 4	17	−12	30	3	50	4	33	2	22	6	22	− 6	28	8
29....	36	− 6	40	15	46	7	20	− 4	40	4	25	10	43	3	22	1	44	26	48	15	40	32	29	15	38	0	38	6
30....	37	0	44	21	30	10	38	3	38	10	37	18	48	18	32	14	48	30	50	22	44	35	46	29	42	10	41	19
Mns..	48.1	8.9	41.1	19.8	48.5	17.7	40.3	13.1	37.5	15.2	40.0	17.1	38.5	13.7	30.4	11.9	36.8	15.7	50.0	14.4	30.0	11.9	35.6	19.2	35.2	9.9	30.1	7.7

Date.	Montana.				North Dakota.										South Dakota.											
	Miles City.		Poplar.		Berthold Agency.		Bismarck.		Dickinson.		Jamestown.		Williston.		Aberdeen. §§		Huron.		Kadoka.		Kimball.		Lemmon.		Pierre.		Rapid City.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	26	15	.....	− 12	25	− 6	23	0	18	− 4	25	− 2	21	− 2	25	5	22	5	32	8	33	3	27	− 8	23	8	19	8
2....	40	11	34	12	36	− 3	37	4	30	− 12	38	− 2	37	7	36	0	30	0	.....	.....	31	3	33	6	35	10	30	5
3....	51	14	45	6	42	6	44	13	45	2	42	12	46	12	40	5	37	19	32	5	39	18	44	20	48	18	51	14
4....	54	25	46	21	57	12	58	18	52	10	57	12	50	18	51	12	52	15	56	24	54	20	56	34	60	22	56	31
5....	50	26	48	24	47	24	43	26	46	25	47	29	47	29	55	15	42	27	44	27	43	25	58	21	41	30	43	33
6....	46	35	42	30	38	22	38	23	39	25	43	26	38	29	46	20	48	31	45	30	44	30	39	24	46	31	42	29
7....	48	24	39	22	39	16	47	22	41	22	50	21	35	23	50	21	51	25	53	24	53	24	47	28	54	25	51	25
8....	40	24	32	− 5	51	26	48	27	51	26	48	29	41	10	50	20	49	33	56	29	52	34	52	10	54	32	55	29
9....	24	2	0	− 14	36	4	33	− 1	38	0	41	10	10	− 7	30	25	40	9	46	12	40	17	18	− 7	36	7	29	3
10....	2	− 12	− 2	− 15	5	− 12	1	− 10	0	− 12	12	− 7	− 1	−14	10	0	17	4	14	2	19	4	0	− 6	14	4	9	− 5
11....	− 2	− 14	− 1	− 15	1	− 7	0	− 7	− 3	− 8	10	− 13	0	−10	6	0	10	− 1	6	− 5	12	0	0	−12	4	− 2	1	− 5
12....	13	− 20	7	− 16	8	− 10	6	− 11	7	− 13	0	− 13	5	−12	10	−10	8	− 6	19	− 6	10	− 6	12	− 2	12	− 3	12	− 8
13....	14	− 6	4	− 5	6	− 7	4	− 1	5	− 5	9	− 9	5	− 4	16	− 3	23	1	15	5	24	0	12	− 2	14	5	21	9
14....	11	5	3	− 4	6	− 3	11	0	8	− 1	10	− 3	3	− 4	16	3	21	10	27	5	25	12	21	8	23	8	41	8
15....	22	− 4	15	− 4	15	− 3	14	0	18	− 4	5	− 9	13	− 2	20	4	22	9	36	6	29	6	28	− 6	31	6	47	15
16....	30	16	15	− 14	18	− 11	29	10	34	5	26	2	14	−10	28	5	26	18	34	22	28	19	32	− 2	31	25	34	23
17....	37	8	31	− 13	25	− 15	23	− 4	31	− 9	28	− 9	26	− 9	18	3	20	12	39	8	32	14	33	13	33	10	41	16
18....	40	32	34	11	32	1	29	9	32	13	26	− 3	35	16	31	0	30	17	37	27	34	15	38	18	37	20	52	31
19....	45	35	39	22	35	20	34	24	37	24	30	15	35	22	26	6	41	19	.....	.....	41	20	38	20	43	28	52	30
20....	48	32	33	13	38	11	32	15	36	18	32	15	34	14	30	4	37	21	47	31	40	28	36	20	44	31	42	27
21....	48	28	40	15	32	12	33	19	37	20	29	4	37	23	40	11	52	20	59	29	52	24	38	18	58	30	55	27
22....	30	24	35	12	34	10	31	3	32	10	28	− 3	27	− 2	30	28	34	14	39	23	40	17	29	− 3	38	15	41	23
23....	44	16	14	− 4	18	− 14	16	− 7	26	− 9	15	− 6	22	−13	16	− 3	18	4	31	10	23	5	32	4	25	8	33	17
24....	50	26	39	7	38	7	36	6	37	16	36	− 3	38	14	36	− 7	40	5	46	16	42	8	38	21	43	14	49	27
25....	58	28	40	20	41	22	40	24	36	24	37	23	39	24	43	6	48	26	55	27	50	26	42	29	53	30	58	31
26....	35	28	32	12	34	22	33	18	41	22	34	25	32	18	35	21	37	24	49	27	41	30	38	12	39	28	48	24
27....	28	16	29	12	25	13	22	8	23	12	34	10	21	9	22	15	27	9	30	17	33	12	19	3	28	12	24	13
28....	32	12	25	4	23	− 2	15	− 2	22	3	13	− 6	23	6	22	− 3	11	1	21	9	15	1	21	6	19	7	27	9
29....	45	12	37	9	37	5	37	8	36	10	33	5	35	14	30	− 5	45	1	50	10	45	4	42	21	49	10	52	11
30....	49	24	38	17	40	3	38	20	39	18	36	20	37	19	36	3	52	18	50	25	52	22	40	23	50	28	53	27
Mns..	36.9	16.5	27.3[a]	4.9	29.4	5.0	28.5	8.5	29.8	7.6	29.4	5.7	26.8	7.3	30.1	6.7	33.0	13.0	38.1[b]	16.0[b]	35.9	14.5	32.1	10.4	36.2	16.6	38.9	17.6

TABLE 3.—*Maximum and minimum temperatures for selected stations for November, 1911. District No. 6*—Continued.

Date.	South Dakota.						Colorado.				Nebraska.															
	Sioux Falls.		Watertown.§§		Yankton.		Denver.		Wray.		Alma.		Bridgeport.		Grand Island.§§		Hay Springs.		Hebron.		Lincoln.		North Platte.		Oakdale.		Omaha.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	24	8	24	− 2	25	11	26	16	41	18	25	21	35	10	24	18	30	4	25	22	40	16	23	11	21	7	38	17
2....	30	6	31	4	31	8	26	14	33	15	23	18	31	10	48	10	25	3	33	12	30	12	25	11	29	1	31	14
3....	27	12	27	4	30	23	55	26	49	9	39	21	53	5	31	22	42	4	33	22	33	25	54	15	31	21	33	27
4....	40	15	53	12	50	18	57	30	66	24	48	28	58	16	44	25	55	18	49	33	48	30	63	18	43	15	46	32
5....	49	24	40	12	48	31	44	32	46	30	45	36	49	20	44	36	40	27	41	35	47	41	40	30	47	21	45	38
6....	42	27	47	30	48	34	55	29	56	24	64	49	46	18	56	30	41	27	61	32	55	34	54	24	50	27	52	38
7....	50	22	43	23	52	29	57	23	54	17	55	26	60	12	51	26	52	22	54	28	53	30	56	19	48	23	53	34
8....	48	34	44	32	52	35	56	32	60	23	53	35	57	21	54	33	54	30	54	38	51	37	60	30	50	34	47	37
9....	48	32	44	33	49	18	56	29	65	26	64	36	60	22	63	32	44	32	63	25	62	36	61	23	49	24	59	35
10....	32	8	11	2	29	11	66	23	67	21	48	19	51	17	35	15	42	10	63	28	40	21	38	12	33	11	44	21
11....	17	2	4	2	25	0	23	− 2	54	1	30	10	39	− 1	9	9	10	− 6	59	20	40	6	28	0	12	− 2	41	5
12....	10	− 6	10	− 9	12	− 3	38	5	30	− 3	30	− 4	35	−10	26	1	22	− 7	45	12	21	2	26	− 4	15	− 3	19	1
13....	36	2	18	0	41	7	51	21	56	20	50	19	53	17	49	9	40	13	21	1	45	16	43	19	43	3	43	14
14....	35	25	27	7	35	18	56	38	58	20	52	30	53	32	52	26	51	30	54	17	48	28	59	26	42	20	48	28
15....	25	10	21	3	30	14	59	34	65	25	60	29	60	26	40	20	50	25	45	20	38	18	56	25	34	13	34	20
16....	23	17	28	3	28	23	56	31	53	21	52	25	42	25	38	26	40	20	62	29	46	24	40	25	29	21	40	26
17....	27	15	19	5	34	19	48	25	51	22	52	28	48	18	49	26	34	18	49	24	44	21	49	25	41	19	40	23
18....	36	20	24	− 2	34	19	54	40	58	21	57	30	52	28	46	33	40	25	50	32	45	27	49	30	42	24	36	25
19....	44	27	35	5	47	19	61	40	53	29	62	29	55	31	58	30	42	30	61	33	55	28	55	36	51	21	49	24
20....	41	7	30	18	43	28	62	35	56	20	55	25	57	18	49	34	52	26	51	31	49	29	52	26	46	24	46	34
21....	48	20	40	7	52	25	62	30	64	29	58	28	64	25	54	29	56	30	54	26	54	25	56	30	50	21	51	31
22....	37	17	30	23	39	16	40	28	47	30	52	31	43	27	46	32	42	30	49	32	45	23	48	23	38	18	41	24
23....	24	7	11	− 1	23	10	46	14	42	13	31	19	42	14	31	16	35	15	32	17	30	15	37	16	25	8	27	17
24....	40	10	34	− 3	47	10	47	27	55	16	52	15	50	15	52	17	45	21	51	9	45	13	55	16	50	5	42	14
25....	48	12	40	4	55	25	58	26	59	17	60	16	57	12	58	22	54	22	59	21	60	26	60	19	57	17	58	28
26....	48	20	34	18	43	27	52	22	56	26	62	17	45	25	59	28	42	24	59	26	59	32	52	27	48	24	59	35
27....	30	15	23	10	32	11	23	12	30	19	40	28	28	14	27	23	26	10	29	25	37	17	29	14	26	12	36	16
28....	18	0	9	− 2	13	3	26	3	19	6	28	13	20	2	17	9	16	4	25	12	19	9	18	4	13	− 1	16	8
29....	41	2	36	− 4	44	5	51	10	48	1	47	7	47	− 2	44	9	38	1	42	5	43	7	47	4	42	− 3	41	7
30....	48	22	40	7	53	26	52	24	58	17	52	20	60	9	57	26	40	10	56	23	55	27	51	18	51	24	51	29
Mns..	35.5	14.4	29.2	8.0	38.1	17.3	48.8	23.9	51.6	18.6	48.2	23.5	48.3	15.9	43.7	22.4	40.0	17.3	47.6	23.0	44.6	22.5	46.2	19.1	38.5	15.0	42.2	23.4

Date.	Valentine, Nebr.		Iowa.						Kansas.										Missouri.							
			Clarinda.§§		Sibley.§§		Sioux City.		Colby.		Concordia.		Salina.		Topeka.		Wakeeney.		Columbia.		Kansas City.		St. Louis.		Unionville.§§	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	19	8	29	26	23	10	31	14	48	16	41	20	41	25	39	22	24	21	42	25	38	23	45	26	32	28
2.....	30	7	36	16	30	4	31	10	35	12	28	16	28	19	31	17	22	15	35	17	32	18	35	22	34	15
3.....	46	17	35	13	26	4	29	24	50	8	35	24	32	25	38	26	33	18	40	25	38	29	40	29	40	16
4.....	58	22	50	27	37	18	40	24	63	22	47	35	44	30	51	36	43	24	46	36	46	36	47	38	44	21
5.....	46	27	45	30	44	24	45	33	54	32	47	42	45	34	47	35	44	35	48	38	47	38	48	41	48	30
6.....	47	28	56	36	37	25	45	37	60	28	63	35	65	35	65	43	63	29	60	48	64	47	61	48	46	36
7.....	52	23	50	32	49	29	50	32	55	20	53	32	57	31	50	35	54	25	55	37	51	39	54	44	50	34
8.....	55	34	50	27	43	29	46	34	60	22	55	35	59	34	54	33	56	29	60	37	55	38	57	43	52	30
9.....	40	8	60	36	50	34	53	28	64	30	63	32	61	34	64	48	65	33	59	49	60	51	57	43	56	36
10.....	34	2	49	29	32	12	35	14	54	19	50	28	58	25	73	38	50	21	77	47	74	45	67	56	66	38
11.....	2	− 4	39	29	12	11	29	2	46	2	55	8	42	12	68	10	39	6	82	13	76	11	78	18	73	40
12.....	19	− 7	20	2	17	− 4	14	− 1	40	0	26	4	26	8	24	7	32	1	17	9	21	6	20	12	16	4
13.....	32	7	45	2	36	− 2	40	9	53	20	45	21	43	28	44	17	48	20	35	14	41	19	32	17	35	6
14.....	50	13	48	20	42	17	37	21	60	25	59	32	62	27	57	34	62	29	49	29	53	33	48	30	44	16
15.....	50	14	38	20	21	9	27	15	68	27	48	29	55	31	47	31	68	31	46	28	47	32	52	31	35	22
16.....	29	22	50	20	25	10	32	21	52	23	71	30	73	35	69	31	61	33	63	27	69	30	52	29	50	24
17.....	42	24	36	25	29	18	32	20	58	23	49	26	60	28	44	28	62	26	64	29	65	29	62	33	38	34
18.....	39	28	35	22	31	10	32	24	60	28	56	33	65	32	53	35	59	29	43	29	46	36	42	31	35	29
19.....	47	31	48	20	42	14	47	24	54	22	62	33	64	30	61	34	61	30	56	29	59	34	49	34	50	28
20.....	48	30	48	22	39	26	44	27	65	26	53	35	55	31	51	35	54	26	46	30	51	40	46	39	44	35
21.....	58	33	46	22	42	18	48	26	53	30	57	32	56	22	54	28	59	26	49	23	53	36	44	33	46	20
22.....	38	18	28	28	36	22	38	16	44	13	51	30	55	35	50	32	52	31	53	36	49	34	52	33	40	26
23.....	30	10	37	10	23	8	22	12	56	13	33	19	41	19	33	20	44	17	36	23	34	22	42	25	20	18
24.....	48	15	50	10	40	3	45	10	60	18	52	14	55	10	42	16	54	15	34	14	40	18	33	19	35	10
25.....	56	25	55	20	46	7	54	26	60	25	61	27	55	19	57	27	61	20	48	26	53	29	48	26	45	11
26.....	41	25	56	22	52	25	50	29	54	20	62	30	64	26	66	34	64	28	62	36	63	38	63	40	54	22
27.....	25	9	35	30	25	21	32	14	43	18	37	22	53	27	48	21	53	23	52	29	47	22	53	36	34	30
28.....	14	1	28	12	14	2	15	5	46	1	22	13	27	20	22	13	26	12	29	15	22	15	36	19	16	12
29.....	46	2	37	4	42	2	44	5	.....	.....	42	6	43	7	36	7	42	4	21	6	27	7	25	13	24	0
30.....	48	19	50	4	47	6	50	27	58	18	56	26	54	18	52	27	53	26	37	18	43	22	41	20	36	2
Mns.....	39.6	16.4	43.0	20.5	34.4	13.7	37.9	19.4	54.4[a]	19.3[a]	49.3	25.6	51.5	25.2	49.7	27.3	50.3	22.8	48.1	27.4	48.8	29.2	47.6	30.9	41.3	22.6

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1911.

DISTRICT No. 7, LOWER MISSISSIPPI VALLEY.

ISAAC M. CLINE, District Editor.

GENERAL SUMMARY.

Moderate temperatures prevailed during the first decade, but from the 11th to 14th a cold wave overspread the district, giving temperatures near freezing southward to the Gulf coast. From the 15th to 26th temperatures were again moderate, but from the 27th to 30th another cold wave overspread the district, giving minimum temperatures of 20° to 30° on the Gulf coast. Precipitation was in the form of rain over the southern and principally snow over the western portion of the district.

TEMPERATURE.

Mean temperatures were below the normal over the entire district, the deficiency ranging from 1.4° over southern Louisiana to 7.2° in the mountains of Colorado. The warmest weather occurred on the 11th, except in the Colorado area, where the monthly maximum occurred at many stations on the 15th or 16th. Maximum temperatures were above 80° in all parts of the district, except in the Colorado and New Mexico areas, where they were between 70° and 80°. The monthly maximum readings at many stations in the southern portion of the district were the highest of record for November. The highest temperature recorded was 94° at Plain Dealing, La. The lowest temperatures occurred generally on the 28th, 29th, or 30th. Minimum temperatures were below 32° over the entire district, and they were below zero in parts of Oklahoma, and the Colorado, New Mexico, and Kansas areas. The lowest temperature recorded was −23° at Westcliffe, Colo., and Elizabethtown, N. Mex.

Monthly mean temperatures and departures from the normal for the various States and parts of States are reported as follows: Colorado area, 33.1°, −4.4°; New Mexico area, 37.6°, −5.0°; Texas area, 45.6°, −3.3°; Kansas area, 42.2°, −4.0°; Oklahoma, 45.6°, −4.4°; Missouri area, 42.3°, −4.8°; Tennessee area, 45.8°, −3.9°; Arkansas, 46.8°, −4.2°; Mississippi area, 50.3°, −4.2°; Louisiana, 55.5°, −3.2°.

PRECIPITATION BY DRAINAGE AREAS.

Arkansas River and tributaries.—Less than the normal precipitation occurred over this drainage area, except in parts of Colorado, Kansas, and Arkansas. Over the headwaters of the Arkansas River in Colorado, the average precipitation from 32 stations was 0.95 inch, about 0.1 inch above the normal. Over those portions of the Arkansas Valley proper that lie in Kansas and Oklahoma, the average from 39 stations was 1.01 inches, about 0.3 inch below the normal. The average from 14 stations in the Cimarron Valley was 0.79 inch, about 0.6 inch below the normal. The precipitation was uniformly light over the Canadian Valley. Over the headwaters of this valley in New Mexico, the amounts from 37 stations averaged 0.45 inch, about 0.3 inch below the normal. Very little precipitation occurred in some localities over those portions of the Canadian Valley that lie in Texas and Oklahoma, where the amounts from 29 stations averaged 0.85 inch, about 1.10 inches below the normal. The average precipitation from 10 stations in the Verdigris Valley was 1.17 inches, about half an inch below the normal. Heavy precipitation occurred over the headwaters of the Neosho Valley in Missouri, but through Kansas the amounts were generally small, the average from 16 stations being 1.88 inches, about 0.3 inch above the normal. Over the Arkansas Valley below the Oklahoma-Arkansas line the amounts from 14 stations averaged 3.21 inches, about 0.4 inch below the normal.

Red River and tributaries.—Very little precipitation occurred over the portions of this valley that lie in New Mexico, Texas, and Oklahoma, where the amounts from 40 stations averaged 0.87 inch, about 1.2 inches below the normal. Over those portions of the valley below the Texas-Arkansas line the amounts from 18 stations averaged 3.95 inches, about 0.2 inch above the normal.

Mississippi River south of St. Louis and small tributaries.—The precipitation was unevenly distributed over this drainage area, being heavy in some localities and light in others. In the immediate Mississippi Valley the amounts from 41 stations averaged 3.92 inches, about 0.2 inch above the normal. Over the valley of the Meramec, there was an excess of about half an inch. The average from 22 stations in the White River Valley was 3.19 inches, about 0.3 inch below the normal. The precipitation was, as a rule, uniformly distributed over the Yazoo Valley, where the amounts from 28 stations averaged 3.60 inches, about 0.2 inch above the normal. The precipitation was heavy over the valley of the Big Black, where the average was 4.27 inches, about 1.4 inches above the normal. Over the Ouachita Valley the precipitation from 17 stations averaged 3.41 inches, about the normal amount.

Louisiana coastal plain.—The precipitation was unevenly distributed over this drainage area, the average from 33 stations being 3.98 inches, about 0.7 inch above the normal.

Monthly precipitation and departures from the normal for the various States and parts of States (in inches) are reported as follows: Colorado area 0.93, +0.02; New Mexico area, 0.43, −0.28; Texas, area, 0.92, −1.07; Kansas area, 1.01, −0.12; Oklahoma, 0.90, −1.19; Missouri area, 3.05, +0.01; Tennessee area, 4.86, +0.12; Arkansas, 3.18, −0.46; Mississippi area, 3.92, +0.75; Louisiana, 4.13, +0.55.

23100—12——6

SNOWFALL.

There was considerable snowfall over the northern and western portions of the district, the amounts ranging from a trace to 54 inches, and a trace of snow was reported as far south as Baton Rouge, La. However, the snow over the regions east of Colorado did not remain long on the ground. In the Colorado area weather conditions in the mountains have been favorable for the water supply. During the month the precipitation was in the form of snow, and, although it was unevenly distributed, the amount, as a whole, was greater than usual. There was an excess in Lake, Huerfano, and Las Animas Counties, and in the northern part of Chaffee County. The average depth on the ground at the close of the month, at a mean elevation of 9,600 feet, was 9.4 inches. In the New Mexico area the snowfall was much below the normal, and conditions thus far have not been favorable for the storage of snow in the gulches.

RIVERS.

The Arkansas River was low throughout the month. In Arkansas the stages were so low that navigation was suspended.

In Oklahoma there were no floods and river stages changed but little.

Only slight changes occurred in the Red River and stages were very low.

The White River was considerably lower than usual, and navigation was practically at a standstill in the upper reaches.

Below St. Louis the Mississippi fell slowly during the first and second decades and rose slightly during the third decade.

NOTES.

Arkansas (H. F. Alciatore, section director).—This was the coldest November experienced in Arkansas in 17 years. The most noteworthy feature of the weather was the occurrence of the cold wave.

Oklahoma (J. Pemberton Slaughter, section director).—Destructive wind and sand storms occurred in some of the western counties. The subsoil is deficient in moisture, especially in the central and western counties; however, the top soil is generally moist and wheat is in fair condition.

FREEZES OF NOVEMBER 13 AND 29-30, 1911, IN THE SUGAR, ORANGE, AND TRUCKING REGION.

By I. M. CLINE, District Forecaster.

Two unusually severe freezes, for the season of the year, occurred in the sugar and trucking regions of Louisiana and Texas during November, 1911. The first freeze occurred on the 13th, and gave temperatures of 26° to 30° over the sugar region, being the coldest weather on record experienced so early in the season. The cane crop was very large and it had matured slowly. Many planters had not put down seed cane and consequently, the approach of such a freeze foreboded much damage to the sugar interests. Advices were received from the central office at 2 p. m., ninetieth meridian time, on November 11 extending cold wave warnings to Little Rock, Shreveport, and Palestine, and giving a special report from Dodge City, Kans. The report from Dodge City in connection with the rapid changes which were taking place at New Orleans indicated an exceedingly rapid movement southward of the cold wave, and on account of the condition of the cane crop a message was telegraphed to the central office recommending that cold-wave warnings be extended to Taylor and San Antonio, Tex., and freezing warnings be issued for the sugar regions of Louisiana and Texas. Authority to issue such warnings was received at 4 p. m., November 11, and the following messages were distributed:

Saturday, November 11.—"East Texas: Cold wave in the interior of south portion; freezing is indicated for the sugar region; temperature will fall to 28° by Sunday night." "Southern Louisiana: Freezing is indicated for sugar region; temperature may fall to 28° by Monday."

Sunday, November 12.—"Texas and Louisiana: Temperature will be 24° to 28° in the sugar and trucking region Monday."

Notwithstanding that the day following the issuance of the warning was Sunday, planters put forth extraordinary efforts and much seed cane was saved, and many planters windrowed their cane as a precaution against a cane-splitting freeze. The temperature fell as low as 26° to 30° in the sugar, orange, and trucking region, but the cold was of short duration and the cane was not split. Seed cane of great value for the coming crop was saved, which without the warning would have been lost, and truck farmers protected and saved their crops.

The freeze of November 29 and 30, 1911, gave temperatures of 19° to 26° throughout the sugar, orange, and trucking region, the cold weather continuing for several days. At New Orleans, the lowest temperature during the freeze was 31°, only 2° higher than the previous lowest temperature of record in November, 29° on November 19, 1903. In the country surrounding New Orleans, however, the radiation was intense and the minimum temperatures were 8° to 14° lower than at New Orleans, and 2° to 4° lower than any temperature previously recorded in the sugar, orange, and trucking regions so early in the season. Timely warnings were issued for these freezes as follows:

Monday, November 27.—"Louisiana: To-night, rain, colder; Tuesday, fair preceded by rain on the coast; cold wave; temperature will be freezing in north and central portions and 32° to 36° in south portion."

"East Texas: To-night, rain or snow in north portion, rain in south portion; much colder; cold wave; temperature will be 24° to 30° in north portion and 32° to 36° in south portion."

Tuesday, November 28.—"Louisiana: To-night, fair, colder; freezing to coast, with temperature 24° to 28° in sugar and trucking regions."

"East Texas: To-night, fair; somewhat colder, except in extreme northwest portion; freezing almost to coast, with temperature 26° to 30° in sugar and trucking regions."

Wednesday, November 30.—"Louisiana and east Texas: To-night, fair; probably freezing to coast; temperature will be 24° to 28° in sugar and trucking regions."

These warnings were given the widest possible distribution. In addition to the regular distribution at Government expense, several sugar planters and orange growers have warnings for temperatures below 30° telegraphed or telephoned to them at their expense in order to get the information at the earliest possible moment. The warnings issued on November 27, 28, and 29 enabled sugar, orange, and truck growers, who had made preparation to act on advices from this bureau, to protect and save their crops to the value of several millions of dollars which otherwise would have been lost. Sugar planters protected their cane by windrowing. Orange growers smudged their orchards and not only saved the trees from damage but saved the ripe fruit on the trees. Truck growers covered, smudged, and flooded their crops.

In order to enable the writer to study the freeze and effects on crops in connection with the forecast work, the recipients of the warnings were asked for reports relative to the effects of the freeze in their localities, and

the following extracts from these reports, showing the lowest temperatures and the action taken to protect crops, will be of service in pointing out to those who did not protect their crops the value which may be derived from the use of the warnings of the Weather Bureau, and also the methods of protection used:

Adeline, La.—F. W. Giles, for the Adeline Sugar Factory Co. (Ltd.): The lowest temperature was 23°. Warnings were received three days in advance of the freeze and were distributed by telephone and messenger. Cane of considerable value was windrowed and saved.

Avoca, La.—Oakley Planting Co. (Ltd.): The lowest temperature was 22°. Warnings were distributed by telephone and cane was windrowed.

Belle Alliance, La.—S. Prejean: The lowest temperature was 25°. Warnings were received and distributed and planters windrowed cane.

Bertrandville, La.—H. Meyer: The lowest temperature was 26°. Warnings were received and planters windrowed all the cane they could and truck growers covered their seed beds. The value of the crops saved runs into the thousands of dollars.

Bayou Goula, La.—J. M. Richards: The lowest temperature was 27°. The warnings were distributed by telephone and cane was windrowed. The crop saved is worth thousands of dollars.

Booth, Tex.—F. I. Booth: The temperature fell to 20°. Warnings were received one day in advance. Planters were notified and commenced windrowing cane.

Bunkie, La.—G. F. Ford: The lowest temperature was 24°. Warnings were received on November 27. Cane was windrowed and a good saving resulted.

Cades, La.—C. E. Smedes: The lowest temperature was 21°. The warning was received on the morning of November 27. Planters were notified and they windrowed their cane.

Carlisle, La.—R. G. Carlisle: The lowest temperature was 25°. The warning was received and distributed by messenger. It was in ample time to enable the saving of beds of young plants, lettuce, cabbage, etc., which were covered with moss. Planters commenced windrowing cane.

Convent, La.—Jules J. Jacob: The lowest temperature was 22°. Warnings were received and promptly distributed. Windrowing cane was resorted to by one and all, and in my estimation the value of the crop saved as a result of the warnings is not less than $60,000.

Dalcour, La.—John Meyer & Sons: The lowest temperature was 26°. Warnings were distributed personally and sugar cane was windrowed. The value of that saved amounts to thousands of dollars.

Diamond, La.—G. V. Groleaux: The lowest temperature was 29°. The warning was received one day in advance and was distributed verbally, by telephone, and by messenger. Crops of vegetables were covered; orange trees were smudged with wood fires and by other methods; and cane was windrowed. The value of the crops saved was $12,000 to $15,000.

Dorceyville, La.—L. M. Soniat: The lowest temperature was 23°. The warnings were received two days in advance and were distributed by telephone. Planters windrowed cane and covered some that was cut. Possibly 10 per cent of the total crop was protected and saved as a result of the warnings.

Falfurrias, Tex.—W. A. Gardner: The lowest temperature was 20°. Warnings were distributed by telephone and messenger. Smudge pots for protection of crops had been ordered for delivery about December 1, and many were caught unprepared. Those who had smudge pots protected and saved orange trees valued at $10,000. Unprotected crops suffered damage to the extent of $100,000.

Franklin, La.—Columbia Sugar Co.: The lowest temperature was 23°. We commenced windrowing cane immediately on receipt of warnings. The value of the cane saved amounts to $1,000.

La Place, La.—Woodland plantation, C. L. Bougere: The lowest temperature was 23°. Warnings were received one and one-half days in advance of the freeze and were distributed by messenger. Planters windrowed cane, and 30 per cent of the crop was actually saved by the warnings.

Lakeland, La.—Alma plantation, J. B. Churchill, president and general manager: The lowest temperature was 24°. The warning was received 48 hours in advance and was distributed by telegraph and telephone. Cane crops of great value were windrowed and saved.

Lawrence, La.—Hon. H. C. Warmoth: The lowest temperature was 26°. Warnings were received two days in advance of the cold and were distributed by telephone. Cane was windrowed as rapidly as possible. The value of that saved was large.

Lockport, La.—S. Bergeron: The lowest temperature was 23°. Warnings were received and distributed by telephone. Cane was windrowed and small plants were covered. A great benefit was derived from the warning.

Mercedes, Tex.—D. H. Kennett, secretary, Commercial Club: The lowest temperature was 21°. Warnings were distributed by telephone and automobile personally. All farmers used water to protect from the freeze.

Alexandria, La.—Richland plantation, A. B. Pendleton: The lowest temperature was 18°. Warnings were distributed by telephone. Superhuman efforts were put forth to protect crops, and the value of that saved is large.

Morgan City, La.—W. V. Bateman: The lowest temperature was 28°. Warnings were distributed by telephone and planters windrowed their cane.

New Iberia, La.—H. Gallois: The lowest temperature was 28°. Warnings were distributed by telephone and planters commenced windrowing cane.

Plaquemine, La.—A. H. Gay, jr.: The lowest temperature was 22°. Warnings were received 36 hours in advance and were distributed by telephone and telegraph. Planters windrowed standing cane, and the value of that saved was large.

Raceland, La.—The Leon Godchaux Co. (Ltd.): The lowest temperature was 24°. Warnings were received and distributed by telephone and otherwise. Windrowing of cane was immediately resorted to, and we believe the warnings were the means of saving a great deal of the crop.

San Benito, Tex.—B. H. Frazier: The lowest temperature was 26°. Warnings were received approximately 36 hours in advance and were distributed by notices posted in prominent places, by telephone, and by ditch riders covering the canal system. Some used smudge pots, others built fires around their land, and a great number irrigated. I think that the cabbage crop was protected to the value of at least $25,000 to $30,000.

Sugarland, Tex.—W. J. Eidridge, president, Cunningham Sugar Co.: The lowest temperature was about 21°. Warnings were received about 24 hours in advance of the freeze and were telephoned to every planter we could reach. Farmers did not protect their crops as much as possible, but some windrowed their cane.

St. Francisville, La.—F. W. Barker: The lowest temperature was 30° on the 29th, and the first warning was received on the morning of the 27th. Crops were protected and saved to the value of about $10,000.

Thibodaux, La.—H. Shrodt: The lowest temperature was 26°. Warnings were distributed by telephone. Some planters began windrowing cane; others did nothing until too late.

Victoria, Tex.—L. M. Stearns: The lowest temperature was 18°. Warnings were distributed by telephone, and some sugar planters succeeded in windrowing a portion of their cane. Many of our largest planters have no telephone connection, and unless they see the posted notices have no way of learning the forecasts.

Mathews, La.—C. S. Mathews: The lowest temperature was 24°. Warnings were distributed to all of our cane growers, and they windrowed their crops. The value of the crop protected and saved amounts to millions of dollars.

Naomi, La.—Riverside Orange Grove, R. S. Moore, owner: The lowest temperature was 20°, warnings for which were received 24 hours in advance. Cane growers windrowed their cane. I smudged my orange groves with fuel-oil burners and saved $4,000 of oranges on the trees.

Sunshine, La.—Granada Plantation, W. W. and J. A. Ventress: The warnings issued on the 28th of November were of very great service, as they enabled us to windrow our cane, thereby saving all the crop. The cane in the windrow is as good as the day it was put down.

The following editorial, which appeared in the Times-Democrat on December 3, 1911, will be of interest in this connection:

WEATHER PREDICTIONS AND CANE CROP.

It is impossible as yet to determine definitely and accurately the damage and loss to the Louisiana cane crop caused by the two recent freezes. It is unquestionably heavy, but how heavy we will not know until a careful examination has shown the condition of the cane. It is believed that it will be possible to determine this point in the next few days, and that we will then know within a few thousand dollars how much Louisiana has lost by the two unexpected and early freezes of last month.

Louisiana—and New Orleans in particular—have counted with great confidence on its sugar crop. The acreage was larger than usual; the cane, although a little backward, was in good condition and promised an exceptionally large tonnage to the acre; and, finally, sugar is commanding a better price than for years past. A profit on the crop of between $7,000,000 and $10,000,000 over last year was looked for, and the circulation of that money promised activity in every line of business.

Suddenly and unexpectedly there descended on the sugar belt the freeze of November 13. It was one of the earliest freezes ever known in this section, and caught the planters unprepared, when they had only just begun their grinding. Fortunately, the freeze continued only a few hours, so that the loss was not as heavy as it would otherwise have been. Two weeks afterwards, on November 27, came another freeze, more far-reaching, more severe, and far more damaging. It is the

uncertainty as to the amount of this damage that renders it impossible to figure out the exact loss.

If we look back to the old records, before the Government established the Signal Service or Weather Bureau, we will find that the damage from premature freezes of this kind brought overwhelming ruin to the cane crop, and that in many years the crop was injured three-fourths and more. The planters had nothing to guide them as to the weather, no notice of the coming of a freeze until it was on them. To-day, because we know more of the weather, the loss is not likely to be over 15 per cent.

It is difficult to appreciate how much these weather forecasts mean to the cane growers, for perhaps no crop is in greater danger from sudden temperature changes than sugar cane. Both of the recent freezes were sudden. The wind which carried the cold wave of November 13 to the sugar belt was blowing 40 to 50 miles an hour. It was impossible, therefore, to predict the freeze more than 40 hours in advance; but these 40 hours given the sugar planters to prepare were invaluable and saved Louisiana from millions of dollars of loss. The second freeze was predicted, or rather announced, two days in advance of its arrival, and gave the planters ample time to get ready for their enemy. These warnings permitted the saving of the greater part of the crop, and were valuable not only for the present but for future years, for they enabled the planters to save the seed cane. But for them we would have had to reduce our cane acreage next year.

The country correspondents of the Louisiana Planter furnish some valuable information on this point. Thus from Iberville we learn that a majority of the planters heeded the warnings at once, and began to windrow the moment the Weather Bureau informed them a cold wave was on its way here, and they thus saved their crop.

In Assumption a number of planters did not believe the warning, and will lose heavily in consequence of their failure to windrow. But the strongest evidence comes from Lafayette, where the Planter's correspondent remarks:

"Fortunately the United States Weather Bureau gave timely warning of the coming freeze, and those planters who had standing cane were able to put it in windrows before the cold blast struck. A few, however, were caught, not fully appreciating the warning, and trusting to luck that after all Uncle Sam's prediction as to destructive cold approaching might not come true. It is, therefore, quite certain that there will be some further loss, not only of standing cane, but of much exposed in heap rows."

Probably next time they will give better heeding to these warnings. The weather reports have vindicated themselves and proved their value; and with this protection and notice properly utilized by the planters the cane crop will be better protected against sudden changes in weather conditions and the crop made more certain. The Weather Bureau in its predictions, especially as far as freezes go, has made great progress in the last few years, and we may hope for still further improvement as the science of metereology progresses.

ABNORMALITIES OF NOVEMBER WEATHER AT SPRINGFIELD, MO.

By JOHN S. HAZEN, Local Forecaster.

Abnormally high barometric pressure prevailed during the first of the month and on November 2 a reduced pressure reading of 30.83 inches was recorded, breaking the record for high barometric pressure during the past 25 years in the month of November.

A comparatively rapid decline followed, until the 5th of the month. This rapid fall of pressure resulted in an unusual elimination of diurnal temperature changes. The temperature at Springfield rose steadily from 2 a. m. of the 5th to 6 a. m. of the 6th. A comparison of the records of temperature from Bentonville, Ark., and Iola and Topeka, Kans., indicates similar conditions over a considerable area, although the records from outside stations do not show as pronounced a change in temperature conditions as is shown by the records at Springfield. On November 11, a pressure, reduced to sea level, of 29.33 inches occurred, which breaks the record for low pressure during the month of November. This reading was followed by a rise in pressure of 1 inch in about 17 hours. On the 11th, cloudy weather prevailed during the early morning, but cleared for a short time before noon. By 2.30 p. m. the sky was again overcast by cirrus and alto stratus clouds, moving rapidly from the southwest, while a dense greenish black bank of clouds was rising along the western horizon, moving gradually to the northwest. By 3.30 p. m. dark and ominous appearing clouds extended along the northwestern horizon and at 3.45 p. m. this cloud overshadowed the city with the speed of an express train, and the darkness of the early evening. The darkness lasted but a few minutes, when the condition was relieved by lighter colored clouds from the north.

The winds ranged from 18 to 30 miles per hour from the south from midnight until 9.30 a. m., changing to southwest after that time and increasing in velocity to 40 miles per hour by 2 p. m. At 3.45 p. m. the winds shifted from southwest to northwest, with one minute from the west and immediately reached an extreme velocity of 74 miles per hour, with a maximum velocity for a 5-minute period of 54 miles per hour. At least a dozen houses and barns were blown down within the city, hundreds of trees were broken off or uprooted, and much damage done to both telephone and electric-light wires. A window in the Government building, 4 by 6 feet, was blown in and entirely across a room 20 feet wide. There was no evidence of a whirl, except as the wind shifted from the southwest to the northwest, and the greater number of trees and houses were blown due east or slightly to the northeast. The highest velocity of the wind as recorded on the tower of the Government building was from the northwest.

Temperature and pressure records indicate clearly the violence and rapidity of the changes. A temperature of 80° was recorded at 3.45 p. m., breaking the record for high temperature during any previous November in the last 25 years, and falling from 80° to 13° at midnight, which likewise breaks the record for low temperature this early in the month of November. Rain, hail, sleet, and snow fell within a period of less than two hours, and a moderate electric storm commenced after the temperature had fallen to below freezing and more than an hour after the wind had shifted.

The center of this disturbance probably passed somewhat to the north of this city, and there was an abnormally rapid rise in pressure from 29.3 inches at 3.45 p. m. of the 11th to 29.8 inches at 7 p. m.

The record for varieties of weather and violent fluctuations in meteorological elements during a 24-hour period has not heretofore been equaled at this station.

TABLE 1.—*Climatological data for November, 1911. District No. 7, Lower Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Colorado.																				
Buena Vista	Chaffee	7,955	11	27.0	− 5.5	52	15†	− 6	29	42	0.63	+ 0.22	0.63	7.0	2	23	0	7	nw.	C. A. Short.
Calhan	El Paso	6,700	4																	H. B. Rice.
Canon City	Fremont	5,343	23	39.6	− 3.0	68	15	5	12†	60	0.34	− 0.13	0.14	3.5	4	23	3	4	n.	U. S. Weather Bureau.
Colorado Springs	El Paso	6,098	31	33.1	− 4.5	60	10†	0	12	52	0.28	− 0.07	0.10	5.0	6	14	10	6	nw.	Colorado College.
Cripple Creek	Teller	9,396	10								0.55	+ 0.03	0.30	11.4	5					F. G. Willis.
Cuchara Camps	Huerfano	8,200	2								2.40		0.81	31.0	6	21	6	3	sw.	George A. Mayes.
Eads	Kiowa	4,209	4																	W. H. Lauck.
Fairview	Custer	9,500	2																	Elizabeth L. Gray.
Fremont Experiment Station.	El Paso	8,850	1	28.0		56	15	− 2	11†	50	0.61		0.28	6.9	5	19	7	4	w.	U. S. Forest Service.
Garfield	Chaffee	9,510	1								1.72		0.55	27.8	10	17	5	8	w.	Lloyd N. Felton.
Hamps	Elbert	5,400	18	32.2	− 4.1	65	10†	− 7	12	51	0.21	− 0.03	0.10	3.5	4	21	2	7	n.	W. Hamp.
Hermit Lake	Custer	10,000	1								3.59		0.92	54.0	8	15	5	10	sw.	John E. Graham.
Hoehne (near)	Las Animas	5,700	19	35.6	− 5.4	70	15	− 10	12	63	0.55	− 0.11	0.27	9.0	6	24	1	5	w.	S. W. De Busk.
Holly	Prowers	3,380	16	37.6	− 6.6	72	16	− 4	12	52	0.60	− 0.04	0.35	3.0	3	18	7	5	se.	Holly Sugar Co.
La Junta	Otero	4,052																		Fred B. Mason.
Lake Moraine	El Paso	10,265	17	24.2	− 5.3	50	20	− 11	28	44	0.67	− 0.19	0.30	17.1	7	13	6	11	sw.	Clyde C. McReynolds.
Lamar	Prowers	3,592	21	38.4	− 4.1	75	10	0	11	60	0.24	− 0.24	0.15	3.0	2	21	4	5	n.	J. T. Lawless.
Las Animas	Bent	3,899	43	38.0	− 0.5	78	16	6	11†	62	1.04	+ 0.73	0.43	16.5	5	18	2	10	n.	F. M. Tague.
La Veta Pass	Costilla	9,000	1																	Clara M. Wright.
Leadville	Lake	10,248	15	20.4	− 7.2	52	20	− 14	12	54	0.98	+ 0.24	0.28	14.1	12	8	14	8	n.	U. S. Weather Bureau.
Limon (near)	Elbert	5,360	4	32.6		66	10†	− 5	11†	60						20	3	7	nw.	F. L. Palmer.
Madrid	Las Animas		1								0.55		0.22	12.2	7					Thos. Sawers.
Marshall Pass	Saguache	10,846	8																	W. L. Williams.
Monument	El Paso	7,200		28.0		61	21	− 8	12	52	0.65		0.37	9.0	3	16	6	8	w.	U. S. Forest Service.
North Lake	Las Animas	8,700	19								2.06	+ 0.87	0.61	26.5	6	19	6	5	nw.	James W. Ingmire.
Pueblo	Pueblo	4,734	23	37.2	− 1.9	68	10	− 3	12	60	0.31	− 0.06	0.18	3.4	5	18	7	5	nw.	U. S. Weather Bureau.
Rocky Ford (near)	Otero	4,177	22	37.1	− 2.8	72	10	− 16	12	52	0.20	− 0.28	0.20	4.0	1	22	3	5	w.	P. K. Blinn.
St. Elmo	Chaffee	9,500	2								2.21		0.33	36.0	11	18	7	5	sw.	Daniel Clark.
Salida	do	7,035	12	32.6	− 5.2	61	21	− 7	28	45	0.50	− 0.24	0.35	4.5	4	25	3	2	w.	M. D. L. Buell.
Santa Clara	Huerfano	8,252	16	32.0[b]	− 4.2	60	15†	− 17	28	42	1.57	+ 0.58	0.63	2.7	8	15[b]	10[b]	3[b]		Lincoln G. Morris.
Sheridan Lake	Kiowa	4,065	9	35.1[c]		62[c]	15	2[c]	30	52	0.24		0.24	2.2	1	17[c]	0[c]	8[c]	n.	Howard Gamble.
Stonewall	Las Animas	8,000	5								1.13		0.30	13.2	6	19	1	10		G. A. Storz.
Trinidad	do	5,994	15	38.7		70	13	− 5	29	51	1.31	+ 0.45	0.39	12.5	9	16	9	3		Walter Dearden.
Two Buttes	Baca	4,100	0																	N. G. Jones.
Victor	Teller	10,100	7	28.3		49	15	− 5	12	46	0.26		0.11	6.6	3	27	2	1	w.	Fred Jones.
Vilas	Baca	3,935	20								1.25	+ 0.68	0.75	3.0	2	17	10	3	nw.	Carrie Konkel.
Wayne	El Paso																			J. C. Groff.
Westcliffe	Custer	7,864	17	29.6	− 3.1	59	19	− 23	28	63	0.28	− 0.63	0.12	6.5	5	13	7	10	nw.	Zack Jordan.
Winfield	Chaffee	9,765	1								0.53		0.18	11.8	11	9	11	10	w.	John G. Payne.
Woodmen's Sanatorium	El Paso			34.6		61	21	− 4	28	55	0.45		0.16	14.0	7	13	10	7	n.	Dr. J. E. White.
Wortman	Lake	11,250	10								2.50	− 0.11	0.80	42.4	8	6	8	16	nw.	George C. Wortman.
New Mexico.																				
Abbott	Mora	5,771	2			72	10	0	29		0.39		0.35	6.5	3	21	5	4	sw.	Agent E. P. & S. W. R. R.
Albert	Union	4,700	20																	Andrew Knell.
Aurora	Colfax	8,849	2								1.03		0.32	15.0	8	6	20	4	nw.	Miss J. Lucero.
Bell Ranch	San Miguel	4,500	12	42.5		72	10†	6	29	55	0.30	− 0.72	0.25	3.0	2	14	9	7	sw.	C. M. O'Donel.
Black Lake	Colfax	8,348	2								0.94		0.27	10.4	6	16	10	4	w.	R. T. Martinez.
Cabeza	San Miguel	5,406	2								0.60		0.40	1.5	2	21	7	2	sw.	Agent E. P. & S. W. R. R.
Campana	do	4,493	2								0.27		0.20	5.0	3	17	8	5	sw.	Do.
Chacon	Mora	9,000	2								2.33		0.80	36.0	7	14	10	6	w.	Alfredo Lucero.
Cimarron (near)	Colfax	6,385	7	36.2		67	19	2	28	48	0.31		0.21	5.0	2	1b	11	4	e.	William French.
Clayton	Union	5,178	6																	Dr. W. W. Chilton.
Clovis	Curry	4,129	1	39.2		75	11	8	29		0.25		0.25	2.5	2	25	1	4	sw.	J. H. Barry.
Cuervo	Guadalupe	4,849	2	43.6		70	10†	11	28†	43	0.49		0.46	5.0	3	21	6	3	sw.	Agent E. P. & S. W. R. R.
Dawson	Colfax	6,396	2								0.58		0.48	3.5	2	9	16	5		Do.
Elizabethtown	do	8,465	5	24.4		57	20	− 23	28	50	1.01		0.32	14.0	8	18	6	6	nw.	Miss M. Carrington.
Folsom	Union	6,399	11	36.2	− 3.0	69	15	2	2	49	0.79	− 0.12	0.44	7.8	5	21	7	2	sw.	David Rope.
Fort Union	Mora	6,835	51	34.9	− 5.5	69	15	− 5	28	53	0.36	− 0.33	0.36	5.0	1	25	0	5	w.	M. C. Needham.
Hayden	Union	4,444	2	40.6		70	10	6	28†	43	0.30		0.30	3.0	1	22	6	2	sw.	J. B. Dickson.
Hoosier Ranch	Mora										0.10		0.10	1.0	1	20	7	3	sw.	W. H. Guthman.
Johnsons Park	Colfax	6,722	2								0.42		0.25	6.0	3	15	11	4	sw.	A. J. Meloche, jr.
Kappus	Quay	4,010	1								0.25		0.25	3.0	1					Anthony Kappus.
Lake Alice	Colfax	7,160	2																	John Campbell.
Logan	Quay	3,851	5	42.7[d]		74[d]	10	6[d]	29	55[d]	0.23		0.23	2.0	1	27	0	3	sw.	John B. Reneau.
Lykins (near)	Roosevelt	5,000	1								0.34		0.26	1.8	2	25	1	4	sw.	J. G. Buchanan.
Maxwell (near)	Colfax	5,894	4								0.10		0.10	1.5	1					Dan N. Jackson.
Melrose	Curry	4,400	3								0.35		0.21	3.0	4					Dr. B. M. Porter.
Miami Ranch	Colfax	6,000	3	36.6		69	19	− 1	28	46	0.21		0.18	2.8	2	18	10	2	w.	Farmer's Development Co.
Mills (near)	Mora	5,985									0.25		0.25	3.0	2	17	8	5	w.	J. E. La Rue.
Montoya	Quay	4,335	2								0.25		0.25	3.0	2	23	3	4	ne.	Agent E. P. & S. W. R. R.
Mount Dora (near)	Union	5,600	1	36.6		68	10	2	28†	50	0.23		0.16	3.0	3	15	11	4	n.	Edwd. F. Grygla.
Nara Visa	Quay	4,225	5	42.1		71	10	9	12	43	0.23		0.23	2.0	1	28	0	2	sw.	George Bringle.
Ocate	Mora	7,500																		Mrs. John R. Strong.
Palo Verde	do	5,880									0.29		0.23	4.2	3	27	0	3	sw.	G. R. Abernathy.
Pasamonte	Union		2								0.16		0.16	2.0	2	17	9	4	w.	J. J. Heringa.
Pleasant View	Mora										0.17		0.10	2.0	3	17	11	2		R. W. Boulware.
Portales	Roosevelt	4,004	2	43.8		78	15	5	29	49	0.59		0.25	1.0	3	24	1	5	w.	Portales Irrigation Co.
Raton	Colfax	6,660	13	34.1°	− 7.3	68°	20	− 2°	28†	40°	0.48	+ 0.05	0.32	6.0	3	18	10	2	w.	Wiseman & Humphrey.
Reclada	San Miguel	8,200	7	31.0		67	16†	− 16	28	51	1.25		0.86	13.5	3	11	15	4	w.	J. Ernest Dailey.
Rosebud	Union	4,500	1								0.06		0.06	T.	1					H. A. Nachtrieb.
Roy	Mora	5,884	2								0.52		0.32	2.0	2	19	5	6	w.	Agent E. P. & S. W. R. R.
Roy (near)	do	5,880									0.09		0.08	1.1	2	23	4	3	se.	Baum Bros.
San Jon	Quay	4,200	4	43.2		72	10†	5	29	47	0.48		0.33	3.0	2	25	1	4	sw.	Jesse T. White.
Solano	Mora	5,622	2	39.6		66	10†	7	12	46	0.16		0.08	2.5	3	26	2	2	sw.	F. M. Hughes.
Springer	Colfax	5,857	15	36.0	− 4.0	72	9	0	28	50	0.24	− 0.28	0.16	3.0	2	27	3	0	w.	Agent A., T. & S. F. R. R.
Taylor	do	5,661	2			68	10	0	29		0.37		0.32	4.5	2	17	1	12	sw.	Agent E. P. & S. W. R. R.
Trementina	San Miguel	5,000	3																	Miss Alice Blake.
Tucumcari	Quay	4,194	6	45.0		73	10†	11	12†	40	0.40		0.20	5.0	3	28	1	1	sw.	John F. Seaman.
Valley	Union	5,000	6								0.47		0.40	5.0	4	17	10	3	s.	Miss M. L. Payne.
Vance (near)	do		1								0.17		0.16	2.5	2	23	4	3	sw.	C. E. Anderson.
Vermejo Park	Colfax	7,600	6	32.4		65	15†	− 12	28	54	0.45		0.24	5.5	4	20	7	3		H. W. Adams.
Wagon Mound (near)	Mora	6,300	2	35.6		70	10	− 1	28†	52	0.40		0.40	4.0	2	22	5	3	w.	Guy L. Barnes.

TABLE 1.—*Climatological data for November, 1911. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Texas.																			
Amarillo	Potter	3,676	19	41.6	− 2.2	75	16	5	29	57	0.94	− 0.22	0.41	8.2	5	20	7	3	sw.	U. S. Weather Bureau.
Archer City	Archer		1								0.54		0.54	0	1	19	3	8	s.	Charles H. Thuman.
Arthur City	Lamar	590	19								2.85	+ 0.02	2.00	0	3	18	0	12	n.	V. V. Bright.
Bonham	Fannin	566	8	52.4		86	10	18	29	57	1.38		0.62	0	4	18	1	11	s.	H. M. Norman.
Canadian	Hemphill	2,339	4	44.8		79	10	6	29	56	0.64		0.25	2.0	4	12	12	6	sw.	Canadian Academy.
Childress	Childress	1,860	18								0.25	− 0.83	0.20	2.5	2	21	6	3	n.	W. E. Davis.
Chillicothe	Hardeman	1,406	3								0.70		0.60	1.0	2					A. B. Connor.
Clarendon	Donley	2,719	6	43.6		79	16	10	29	49	0.90		0.38	4.0	4	21	1	8	sw.	Whitfield Carhart.
Clarksville	Red River	442	11	51.8	− 4.5	87	11	17	30	57										J. W. O'Neill.
Claude	Armstrong	3,397	6								0.25		0.25	4.0	1					Ft. W. & D. C. Ry.
Dalhart	Dallam	3,998	6																	F. L. Kennard.
Denison	Grayson		11								0.60	− 1.95	0.18	0	7	13	2	15	n.	E. B. Wilson.
Finley	Bowie		1								1.45		0.56	0	3	15	0	15	s.	Robert L. Smith.
Henrietta	Clay	915	19	48.4	− 3.7	89	11	11	30	53	1.41	− 0.67	0.50	0	4	18	3	9	s.	C. K. Brown.
Hereford	Deaf Smith	3,750	6																	A. C. Elliott.
Memphis	Hall	2,067	6	41.9		70	6	12	29†	34	1.00		0.75	2.5	3	19	0	11		Ft. W. & D. C. Ry.
Miami	Roberts	2,743	5	44.3		75	10†	5	29	50	1.04		0.48	5.0	4	22	4	4	n.	J. E. Kinney.
Mobeetie	Wheeler		17																	Dr. W. J. Joss.
Nazareth	Castro		5																	Rev. P. A. Kaelin.
Ochiltree	Ochiltree		3								0.65		0.40	4.0	3					S. J. Allen.
Pampa	Gray	3,226	2																	B. E. Finley.
Panhandle	Carson	3,450	2								0.50		0.20	5.0	3	15	10	5		J. Sid O'Keefe.
Paris	Lamar	592	22	49.6	− 5.2	84	10	15	30	50	1.61	− 1.23	0.68	T.	9	16	0	14	n.	Robert A. Miller.
Plemons	Hutchinson		4	40.6		75	10†	0	29	53	0.97		0.52	6.0	4	20	4	6	sw.	C. S. Solomon.
Quanah	Hardeman	1,563	6	46.6		79	10	13	29	39	0.42		0.30	1.2	3	19	3	8	n.	William H. Crawford.
Ringo Crossing	Hopkins		1								1.67		0.72	0	3	11	1	18	sw.	H. J. Palmer.
Romero	Hartley		1	42.2		72	10	7	12	47	0.38		0.25	5.2	3	22	5	3	sw.	R. S. Chamberlain.
Sherman	Grayson	745	18	52.6	− 1.0	81	10	21	12†	38	0.69	− 1.84	0.65	0	2	13	4	13	n.	R. A. Gibbs.
Stratford	Sherman	3,699		41.8		73	10†	2	29	56	0.20		0.20	3.0	1	16	10	4	n.	J. W. Elliott.
Sulphur Springs	Hopkins	530	17																	John Neeley.
Texline	Dallam	4,604	6								0.25		0.15	2.5	2					Ft. W. & D. C. Ry.
Tulia	Swisher	3,501	13	42.4		76	16	3	29	53	1.36	− 0.44	0.50	8.0	4	14	11	5	sw.	Lou Mulhall.
Wichita Falls	Wichita	958	19								0.62	− 1.37	0.62	0	1	16	8	6	n.	E. F. Mittmann.
Winfield	Titus		1								1.65		0.54	0	5	18	2	10	sw.	J. C. Bostick.
Kansas.																				
Alden	Rice	1,684	1								1.34		0.65	0.5	4	17e	0e	10e	nw.	L. B. Wait.
Anthony	Harper	1,329	14	43.2		78	10	8	29	51	1.04	+ 0.06	0.57	2.1	4	15	6	9	sw.	R. H. Beebe.
Ashland	Clark	1,951	23	41.2	− 2.1	80	16	1	29	54	0.96	+ 0.10	0.45	2.5	5	19	5	6	nw.	C. W. Carson.
Burlington	Coffey	1,010	18	39.4	− 4.9	77	11	5	29	62	1.20	− 0.11	0.87	2.0	2	9	13	8	s.	O. E. Sanford.
Chanute	Neosho	940	7	40.6		81	11	8	12†	67	1.03		0.52	1.5	5	0	17	13	s.	C. W. Brown.
Cimarron	Gray	2,700		38.4		69	15†	1	29	48	0.87		0.49	3.4	5	22	1	7	s.	C. C. Isely.
Coldwater	Comanche	2,090	14	40.8	− 3.0	79	16	1	29	54	0.38	− 0.35	0.21	2.0	3	17	4	9	s.	J. L. Stanley.
Columbus	Cherokee	898	21	40.8	− 4.7	81	11	10	29	64	2.99	+ 0.66	0.96	1.2	8	15	6	9	sw.	O. E. Skinner.
Coolidge	Hamilton	3,348	14	35.5	− 4.6	72	10†	− 5	12	51	0.22	− 0.32	0.12	4.2	3	20	4	6	nw.	W. R. Padley.
Cottonwood Falls	Chase	1,234	7	40.2		75	10	7	12	57	1.06		0.60	3.0	5	15	6	9	s.	E. B. Greene.
Council Grove	Morris	1,234	2	39.6		76	26	5	12	54	0.73		0.32	1.0	5	9a	16a	4a	sw.	J. P. Blackledge.
Cunningham	Kingman	1,680	27	41.4	− 4.8	78	15	6	29	47	0.74	− 0.09	0.38	0.5	5	16	4	10	sw.	W. H. Morton.
Dodge City	Ford	2,513	37	38.0	− 2.5	71	16	1	29	47	0.99	+ 0.44	0.53	5.1	5	15	9	6	nw.	U. S. Weather Bureau.
El Dorado	Butler	1,291	9	41.2		76	10	6	29	56	0.78		0.28	2.5	4	16	8	6	s.	W. Y. Miller.
Ellinwood	Barton	1,700	36	39.0	− 3.4	73	16	4	29	49	1.03	+ 0.18	0.46	T.	4	12	10	8	nw.	Martin Musil.
Emporia	Lyons	1,138	30	41.3	− 2.4	75	10	6	29	56	1.23	− 0.06	0.57	3.5	5	10	12	8	nw.	W. H. Boyles.
Eureka	Greenwood	1,079	15	38.8b		78	11	6e	29	44e	0.78	− 1.02	0.58	2.0	2	16	9	5	nw.	W. S. Moonlight.
Fall River	do	925	15	41.4	− 4.5	79	10	6	29	62	1.45	− 0.34	0.50	3.0	4	17	8	5	s.	J. McDaniel.
Fargo	Seward		1								1.00		0.50	5.0	3	21	2	7	n.	N. B. Swink.
Fredonia	Wilson	864	8	41.6		80	11	5	29	62	0.96		0.54	1.5	6	14	4	12	nw.	B. W. Holmes.
Garden City	Finney	2,836	22	37.7	− 5.3	68	6†	2	29	51	0.95	+ 0.31	0.50	4.5	4	18	7	5	s.	B. F. Stocks.
Great Bend	Barton	1,850	2								1.03		0.58	T.	2	16j	11j	3j	sw.	I. Pritchard.
Greensburg	Kiowa	2,235	4	40.3		77	16	4	29	56	0.82		0.32	1.5	5	19	2	9	nw.	C. C. Raymond.
Grenola	Elk	1,116	23	42.0	− 3.0	79	10	8	29	62	1.02	− 0.73	0.62	1.5	5	13	7	10	nw.	W. H. Lawyer.
Hess	Gray	2,700	5			70	10	− 3	29	39	1.15		1.05	3.5	2	9h	6h	7h	nw.	Fred Mallonee.
Howard	Elk	1,112	4								1.16		0.58	1.5	3	16a	3a	10a	s.	J. W. Eby.
Hugoton	Stevens		7	42.8		80	10	− 4	28	62	1.22		0.71	9.5	6	14	13	3	s.	E. M. Anderson.
Hutchinson	Reno	1,535	21	40.4	− 4.5	73	16	6	29	44	1.17	+ 0.45	0.84	0.8	5	18	2	10	nw.	E. S. Webster.
Independence	Montgomery	800	37	43.0	− 3.0	83	11	9	29	63	1.43	− 0.51	0.70	1.2	9	13	5	12	s.	F. L. Kenoyer.
Iola	Allen	984	5	40.0	− 3.0	79	11	7	29	67	1.23	− 0.15	0.66	3.1	5	12	6	12	nw.	U. S. Weather Bureau.
Irene	Hamilton	3,440	1	37.8		71	16	1	12	55	0.65		0.50	4.5	3	15a	6a	8a	nw.	N. M. Herbig.
Jetmore	Hodgeman	2,268	10	37.4		69	15	− 1	29	45	0.62	− 0.03	0.30	0.8	4	7	14	9	nw.	James Aiken.
Kingman	Kingman	1,504	3	41.0		74	16	7	29	53	0.87		0.50	2.2	6	14	5	11	nw.	B. B. Anawalt.
La Crosse	Rush	2,061	9			77	15	1	29	51	0.65		0.65	T.	1	15e	4e	6e	sw.	Rodney Torrey.
Lakin	Kearny	2,993	21	36.4	− 5.9	70	16	− 1	29	43	0.68	+ 0.16	0.25	6.0	4	21	6	3	s.	C. H. Longstreth.
Larned	Pawnee	2,090	26	39.6		75	16	3	29	48	0.94	− 0.02	0.43	0.6	5	17	4	9	n.	H. H. Wolcott.
Lebo	Coffey	1,138	25	38.8	− 4.1	74	11	2	29	61	1.17	− 0.46	0.40	4.2	5	14	7	9	nw.	J. J. Bowman.
Le Roy	do	990	2								0.80		0.72	0.2	2	14	2	14	s.	F. W. Schmitt.
Liberal	Seward	2,843	4	39.6		76	16	2	29	51	0.60		0.40	6.0	3	21	1	8	s.	Dr. R. T. Nichols.
Macksville	Stafford	2,032	22	39.8	− 3.8	75	16	6	12	52	0.88	− 0.01	0.52	T.	4	16	5	9	nw.	Mrs. Nelia Poling.
McPherson	McPherson	1,495	22	39.0	− 4.2	72	16	6	29	55	1.06	+ 0.04	0.62	T.	4	21	2	7	nw.	Ed. F. Haberlein.
Madison	Greenwood	1,074	10	38.4		75	10†	3	29	63	1.00	− 0.70	0.45	2.0	3	9	15	6	se.	C. A. David.
Marion	Marion	1,310	18	40.2	− 4.0	74	16	5	29	51	0.82	− 0.24	0.52	1.0	5	13	10	7	s.	Jerry Forney.
Medicine Lodge	Barber	1,259	18	41.6	− 3.9	77	10†	5	29	54	0.42	− 0.54	0.24	0.8	5	19	3	8	nw.	S. P. Garrison.
Mount Hope	Sedgwick	1,410	14								1.00	− 0.27	0.60	T.	3	15	4	11	s.	H. N. Renfrew.
Neosho Rapids	Lyon	1,092	6								1.17		0.66	4.0	3	17	2	13	nw.	W. H. McMullin.
Ness City	Ness	2,260	18																	J. K. Barnd.
Newton	Harvey	1,454	14	41.2	− 4.1	74	10	7	12†	51	0.81	− 0.22	0.40	T.	5	13	9	8	nw.	H. A. Brush.
Norwich	Kingman	1,496	15	42.6	− 3.6	75	10†	8	29	56	0.91	− 0.26	0.53	1.5	4	13	10	7	nw.	N. I. Farris.
Oswego	Labette	899	17	42.4	− 4.9	80	11	7	29	60	2.50	+ 0.43	1.00	2.0	5	14	8	8	sw.	Jas. M. Currigan.
Plains	Meade	2,766	1	40.6		73	10†	2	29	54	0.62		0.42	2.0	2					E. J. Henning.
Pratt	Pratt	1,950	16	40.8	− 3.9	75	16	5	29	53	1.74	+ 0.86	0.68		5					A. J. Van Vranken.
Richfield	Morton			38.0	− 5.3	75	10	− 1	29	59	0.32	− 0.24	0.15	6.5	3					M. J. Allen.
Rome	Sumner	1,218	25	42.4	− 3.6	79	10	7	29	58	0.65	− 0.57	0.35	2.0	5	16a	3a	10a	n.	D. M. Adams.
Sedan	Chautauqua	834	26	42.8	− 3.2	81	11	8	29	63	1.12	− 0.47	0.56	0.9	4	16	7	7	s.	A. Y. Buckles.
Toronto	Woodson	1,040	14	40.9	− 4.5	81	11	4	29	50	1.23	− 0.21	0.55	1.5	3	13	2	15	s.	M. A. Webb.
Ulysses	Grant	3,027	20	38.2	− 4.0	73	16	1	29	41	1.10	+ 0.59	0.40	8.0	4	19a	4a	6a	sw.	T. W. Marshall.
Walnut	Crawford	940	9																	R. C. Harlan.

TABLE 1.—*Climatological data for November, 1911. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Kansas*—Continued.**																				
Wellington	Sumner	1,225	15	42.8	− 2.2	79	10	5	29	60	0.85	− 0.35	0.45	2.5	5	14	6	10	s.	E. O. G. Kelly.
Wichita	Sedgwick	1,377	24	40.6	− 3.2	75	10	9	29	59	0.87	− 0.31	0.40	2.3	4	15	6	9	s.	U. S. Weather Bureau.
Winfield	Cowley	1,124	17																	M. B. Light.
Yates Center	Woodson	1,068	32	39.3	− 6.1	78	11	1	29	65	1.52	− 0.21	0.70	7.0	4	15	10	5	nw.	J. W. Tipton.
Oklahoma.																				
Ada	Pontotoc	1,001	3	47.6	.....	84	11	14	29	52	0.94	.....	0.75	T.	3	19	5	6	s.	W. S. Creveling.
Alva	Woods	1,350	6	44.2	.....	80	10	5	29	57	0.22	.....	0.10	2.0	3	17	5	8	s.	S. A. Stech.
Apache	Caddo	1,255	2	46.8	.....	86	11	11	29	62	0.84	.....	0.70	T.	3	21	5	4	s.	G. D. Teeter.
Arapaho	Custer	1,575	17	46.2	− 2.3	79	....	9	....	54[b]	1.30	− 0.57	0.75	4.0	3	20	5	5	s.	J. C. Brower.
Ardmore	Carter	872	10	49.8	− 4.0	86	11	15	12†	46	1.05	− 1.76	0.50	0	6	17	1	12	s.	H. T. Nisbett.
Arnett	Ellis	2,136	7	42.6	.....	82	10	3	29	53	0.70	.....	0.30	2.6	3	20	4	6	s.	C. H. Holmes.
Bartlesville	Washington	687	3	43.2	.....	85	11	11	29	65	1.34	.....	0.51	1.5	6	18	1	11	s.	Dr. A. P. Owens.
Beaver	Beaver	2,500	15	42.0	− 2.9	75	10	2	29	53	0.63	− 0.56	0.20	5.8	4	23	2	5	s.	W. C. Frazer.
Blackburn	Pawnee	800	10	45.7	− 4.2	85	11	10	29	64	1.01	− 1.78	0.68	0.1	5	18	5	7	sw.	M. M. Rhodes.
Cache	Comanche	1,350	5	47.6[e]	.....	89	....	13	....	70[e]	1.49	.....	1.49	T.	1	19[e]	2[e]	4[e]	s.	Mrs. Frank Rush.
Calvin	Hughes	713	6								1.19	.....	0.44	0	6	22	0	8	s.	Thomas Purcell.
Chandler	Lincoln	865	10																	Chas. L. Kern.
Chattanooga	Comanche	1,150	5	47.2	.....	87	11	10	29	57	0.84	.....	0.76	0	2	20	6	4	sw.	Squire Humble.
Chickasha	Grady	1,091	10	47.9	− 4.3	89	11	15	24†	64	0.54	− 1.77	0.52	0.2	2	27	0	3	n.	J. C. Good.
Cloud Chief	Washita	1,400	9	47.0	.....	84	11	10	29	61	1.10	.....	0.48	1.4	4	19	3	8	s.	J. P. Stutzman.
Durant	Bryan	643	10	48.7	− 5.1	83	10	17	29†	46	1.03	− 1.36	0.29	0	8	15	3	12	n.	Nelson Houk.
Eldorado	Jackson	1,456	4	48.0	.....	84	....	13	....	54[a]	0.41	.....	0.30	1.1	2	20[a]	8[a]	1[a]	nw.	T. W. Lanham.
Elk City	Beckham																			R. J. Carlile.
El Reno	Canadian	1,400	20	44.6[d]	− 4.8	81	....	10	....	59[d]	0.38	− 1.62	0.38	T.	1	17[d]	2[d]	7[d]	s.	Rose E. Walker.
Enid	Garfield	1,269	10	43.9	− 5.5	83	10	9	29†	54	0.94	− 1.24	0.43	2.0	4	19	2	9	n.	Uri B. Worcester.
Erick	Beckham	2,058	6	41.8	.....	77	....	13	....	38[a]	0.57	.....	0.30	3.0	2	22	2	6	n.	A. W. Hanes.
Fairland	Ottawa	839	11	44.8	− 5.7	84	11	10	29	46	2.19	− 0.50	1.25	T.	6	13	13	4	s.	C. W. Prier.
Fort Gibson	Muskogee	556	6								1.89	.....	0.65	0.5	9	19	1	10	s.	John T. Welsh.
Frederick	Tillman	1,293	5	48.2	.....	87	11	9	29	58	0.74	.....	0.69	0.5	2	20	4	6	se.	B. B. Bradley.
Goodwell	Texas	3,300	1	44.1	.....	74	10†	4	28	54	0.50	.....	0.30	5.0	2	16	10	4	s.	S. W. Black.
Guthrie	Logan	1,000	18	46.6	− 4.1	85	11	10	29	63	0.60	− 1.78	0.50	0.3	2	21	0	9	s.	S. E. Snyder.
Guymon	Texas	3,133	2																	A. L. Mordt.
Harrington	Roger Mills	2,200	7	44.4	.....	77	9	4	28	56	0.53	.....	0.32	0.2	3	20	5	5	sw.	T. Compton.
Hartshorne	Pittsburg	700	12	46.2[e]	− 9.5	84	11	10	29	65[e]	1.79	− 1.61	0.55	T.	4	15[d]	2[d]	9[d]	s.	G. E. Glendenning.
Healdton	Carter	900	17	47.5	− 5.8	89	11	7	30	57	0.80	− 1.65	0.65	T.	3	15	11	4	n.	C. H. Heald.
Helena	Alfalfa	1,396	3	44.4	.....	80	10	8	29	56	0.76	.....	0.45	1.5	3	20	1	9	n.	R. E. Ellis.
Hennessey	Kingfisher	1,166	16	46.0	− 4.2	81	10	5	12	59	0.85	− 0.94	0.70	1.5	2	13	15	2	n.	Mrs. M. C. Parks.
Hobart	Kiowa	1,396	8	45.5	.....	81	11	9	12†	58	0.58	.....	0.42	1.1	3	18	11	1	s.	Leland Turnbull.
Holdenville	Hughes	900	10	46.2	− 6.4	84	11	14	29	44	0.74	− 1.89	0.60	T.	3	20	2	8	n.	Eula L. Rutherford.
Hooker	Texas	3,038	5	40.8	.....	76	10	1	29	56	0.59	.....	0.30	5.5	5	13	2	15	s.	H. N. Kelly.
Hurley	Cimarron	4,200	3	36.9	.....	70	10†	− 3	28	46	0.70	.....	0.40	7.0	3	1	25	4	s.	Dr. C. W. Meyers.
Idabel	McCurtain	474	3																	M. L. Henderson.
Jefferson	Grant	1,062	17	42.6	− 4.1	80	10	9	29	48	0.84	− 0.65	0.67	2.0	3	19	6	5	s.	T. E. Beck.
Kenton	Cimarron	4,000	10	40.3	− 4.6	75	16	5	12	56	0.10	− 0.48	0.10	1.5	1	18	8	4	n.	Wm. H. Guy.
Kingfisher	Kingfisher	1,046	14	46.4	− 4.0	83	10	9	29	57	0.58	− 1.53	0.34	0.5	4	15	8	7	s.	J. C. Cross.
McAlester	Pittsburg	698	15	49.4	.....	84	10	11	12	48	2.33	− 0.52	0.79	T.	4	19	2	9	s.	Wm. Noble.
McComb	Pottawattomie	1,200	17																	J. E. McNair.
Mangum	Greer	1,585	18	49.8	− 0.9	87	19	10	29†	67	0.48	− 1.15	0.35	T.	3	16	6	8	n.	F. D. Dodson.
Marlow	Stephens	1,292	10																	Wm. B. Anthony.
May	Harper																			G. C. Gray.
Meeker	Lincoln	1,030	17	48.2	− 1.6	81	10	14	12†	58	1.25	− 0.88	0.85	1.0	3	20	2	8	s.	Dr. J. H. Baugh.
Muskogee	Muskogee	614	12	46.6	− 5.5	84	11	15	12†	56	1.52	− 0.94	0.72	T.	3	18	1	11	n.	J. Harry Randall.
Mutual	Woodward		3	42.0	.....	80	10	4	29	58	0.61	.....	0.28	1.0	2	17	3	10	s.	Thos. Martin.
Neola	Caddo	1,500	5	46.1	.....	84	11	8	29	60	0.35	.....	0.19	1.6	4	20	4	6	s.	R. N. Schooling.
Newkirk	Kay	1,149	13	45.0	− 3.6	80	10	7	29	62	0.61	− 1.14	0.40	T.	2	9	5	16	s.	P. H. Albright & Co.
Norman	Cleveland	1,171	16	46.6	− 4.1	84	11	12	29	57	1.27	− 1.17	0.72	1.2	5	17	6	7	s.	S. E. Boyd.
Oakwood	Dewey	1,854	1	41.8	.....	77	10	4	29	57	0.91	.....	0.46	2.0	5	19	3	8	s.	Dr. F. P. Osborn.
Okeene	Blaine	1,194	7	45.4	.....	80	10	9	29	59	0.77	.....	0.47	1.6	5	23	1	6	s.	Dr. L. H. Murdoch.
Oklahoma	Oklahoma	1,247	20	45.5	− 2.4	83	11	11	29	66	0.54	− 1.71	0.45	1.0	4	17	4	9	s.	U. S. Weather Bureau.
Okmulgee	Okmulgee	752	7	44.6	.....	85	....	15	....	60[b]	1.07	.....	0.87	T.	3	16	3	11	s.	J. L. Maynard.
Pauls Valley	Garvin	880	11	47.8	− 4.8	87	11	12	....	71[a]	0.58	− 1.81	0.42	0	2	15	12	3	n.	A. M. Foss.
Pawhuska	Osage	918	11																	R. C. Block.
Perry	Noble	920	12	44.6	− 5.5	81	10	9	29	58	0.56	− 1.62	0.41	2.0	2	16	8	6	sw.	G. C. Wollard.
Ravia	Johnston	796	8	47.8	.....	84	11	11	30	50	0.80	.....	0.65	0	2	18	2	10	n.	R. G. Guptill.
Sac and Fox Agency	Lincoln	900	18	46.6	− 3.9	85	11	13	29	61	1.25	− 0.81	1.00	2.5	4	19	2	9	s.	M. R. Gayle.
Shawnee	Pottawattomie	1,041	10	45.1	− 6.6	84	11	10	29	46	0.80	− 0.90	0.51	T.	4	9	16	5	se.	Mrs. Kate Chatman.
Snyder	Kiowa	1,356	4	47.8	.....	83	10	12	29	48	0.65	.....	0.57	T.	2	19	6	5	s.	Dr. W. C. Woodard.
Stillwater	Payne	880	18	45.6	− 3.1	88	11	10	29	47	0.81	− 1.33	0.48	1.0	4	18	2	10	s.	A. R. Evans.
Tulsa	Tulsa	700	22	44.2	.....	85	11	13	29†	44	1.15	− 0.98	0.80	0.8	7	19	5	6	n.	Dr. H. M. Hutchinson.
Vinita	Craig	698	7	44.6	.....	83	11	11	29	57	1.95	.....	1.13	T.	3	24	0	6	sw.	W. C. Chamberlain.
Wagoner	Wagoner	588	14																	S. L. Hatfield.
Waukomis	Garfield	1,258	14	47.1	− 2.9	84	10	9	29	62	0.80	− 0.98	0.58	1.0	3	18	4	8	nw.	R. C. Shades.
Waurika	Jefferson	988	1	49.2	.....	89	11	12	29	56	0.89	.....	0.74	0	4	15	7	8	s.	B. A. Swindler.
Weatherford	Custer	1,639	10	44.8	− 4.5	81	10†	9	29	57	0.67	− 1.30	0.40	2.7	3	18	2	10	s.	M. D. Reed.
Webbers Falls	Muskogee	479	12	45.8	− 4.3	86	11	12	30	60	2.70	− 0.23	0.90	0	5	9	15	6	e.	B. D. Boulineau.
Whiteagle	Kay	945	7	44.8	.....	82	10	10	29	62	0.66	.....	0.45	1.0	3	19	4	7	s.	J. M. Dankwardt.
Woodward	Woodward	1,893	8	42.8	.....	82	10	3	29	53	0.52	.....	0.20	5.5	3	20	3	7	n.	R. A. Boyle.
Missouri.																				
Belle	Maries	.....	20	40.3	− 6.0	76	11	9	29	51	3.35	+ 0.89	1.10	3.0	8	9[b]	10[b]	9[b]	s.[b]	A. J. Wofford.
Birchtree	Shannon	1,200	19	42.6	− 3.5	77	11	10	12	64	3.17	+ 0.32	0.98	0	7	19	2	9	s.[b]	V. H. Kirkendall.
Cardwell	Dunklin	.....	1	44.8	.....	80	11	16	29	52	3.18	.....	1.25	0	5	11	12	7	s.	E. M. Perry.
Caruthersville	Pemiscot	.....	21	46.5	− 2.4	80	11	15	30	55	3.85	− 0.63	1.80	T.	6	14	1	15	n.	H. E. Averill.
Cassville	Barry	.....	1	41.4	.....	80	11	9	12†	51	3.22	.....	1.12	0.1	5	18	6	6	s.	Mrs. Zuma Bloomer.
Dean	McDonald	.....	13	43.2	− 6.8	82	11	8	29†	50	3.79	+ 0.76	1.41	0.2	11	22[b]	0[b]	6[b]	.....	H. E. Dean.
Doniphan	Ripley	440	8	43.2	.....	77	11	13	30	59	3.53	.....	0.80	T.	7	20	2	8	s.	W. W. Martin.
Gano	Dent	.....	9	42.2	.....	93	11	9	12†	64	2.56	.....	0.74	1.2	8	17	5	8	sw.	A. C. Leech.
Goodland	Iron	900	7	40.0	.....	76	11	6	30	62	2.52	.....	0.80	....	6	20	3	7	n.	F. M. Adams.
Hollister	Taney	1,000	2	44.4	.....	80	10	12	12	32	2.45	.....	0.95	T.	5	20	0	10	nw.	W. P. Chapmann.
Ironton	Iron	925	34	40.4	− 3.1	76	11	10	12†	38	2.68	− 1.29	0.95	0.5	7	10	3	17	nw.	W. H. Delano.
Jackson	Cape Girardeau	458	21	43.4	− 2.6	78	11	15	13	56	2.68	− 0.81	0.86	0	7	10	10	10	s.	L. M. Bean.
Joplin	Jasper	979	33	46.2	.....	82	11	11	12	64	2.92	+ 0.37	1.18	0	5	20	0	10	sw.	Miss Ruth Smith.
Koshkonong	Oregon	911	11	43.9[e]	− 5.5	74	11†	13	12†	61	2.84	− 0.51	0.83	T.	8	15	8	7	nw.	J. W. Hitt.

TABLE 1.—*Climatological data for November, 1911. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Missouri*—Continued.**																				
Lamar	Barton	964	30	40.8	− 5.5	83	11	10	29†	41	3.20	+ 1.06	1.22	T.	5	13[a]	6[a]	10[a]	s.[a]	E. H. Adams.
Marble Hill	Bollinger	420	21	40.6	− 5.1	70	11†	11	13	52	2.15	− 1.15	0.65	0	5	14	10	6	n.	A. F. Hendrix.
Mountaingrove	Wright	1,490	13	41.7	− 5.4	77	11	9	12	61	2.45	+ 0.28	0.72	T.	7	15	7	8	nw.	Mo. Fruit Exp. Sta.
Mount Vernon	Lawrence	1,480	34	40.6[a]	− 6.7	70	16	9	13†	34	2.59	− 0.35	0.87	2.0	6	12	10	8	sw.	J. R. White & Son.
Neosho	Newton	1,023	29	42.4	− 4.5	82	11	10	12	56	4.03	+ 1.01	1.34	2.0	8	16	3	11	sw.	W. O. Buck.
New Madrid	New Madrid	285	19								4.49	+ 0.02	1.65	0	8	14	1	15	se.	Miss Josie Smith.
Oakfield	Franklin	793	20	40.0	− 5.8	80	11	11	13†	44	3.02	+ 0.31	0.70	1.8	10	8	10	12	s.	E. E. Steines.
Olden	Howell	1,246	22	43.0	− 4.3	78	10	10	12†	65	2.98	− 0.09	2.15	T.	3	12[a]	9[a]	8[a]	nw.[a]	J. D. Evans.
Rolla	Phelps	1,139	31	40.2	− 3.0	78	11	9	12	44	3.06	+ 0.54	1.02	0.5	9	17	5	8	nw.	Prof. P. J. Wilkins.
Springfield	Greene	1,350	23	40.4	− 4.0	80	11	9	12	67	2.16	− 0.48	0.62	0.6	6	14	6	10	se.	U. S. Weather Bureau.
Steelville	Crawford	746																		Edwin Pumphrey.
Kentucky.																				
Blandville	Ballard	445	29	44.2	− 2.4	77	11	16	13	57	4.73	+ 0.27	1.68	T.	7	9	8	13	nw.	E. W. Horr.
Lynnville	Graves		8																	
Tennessee.																				
Arlington	Shelby		29																	A. Thomas B. Etheridge.
Bolivar	Hardeman	450	24	44.8	− 4.6	79	11		30		3.85	− 0.20	1.10	T.	9	15	1	14	n.	Miss Mary A. Smith.
Brownsville	Haywood	361	26	47.4	− 2.9	78	11	14	29	44	4.75	+ 0.33	1.32	T.	8	12	3	15	s.	Miss Hattie N. Moses.
Covington	Tipton	311	24	45.8	− 4.2	78	11	18	30	30	3.98	− 0.52	2.00		5	15	0	15	n.	James S. Ruffin.
Dyersburg	Dyer	310	28	46.2	− 3.3	79	11	17	30	36	5.35	+ 0.44	2.45	0	6	18	4	8	se.	Miss Martha A. Sinclair.
Jackson	Madison	450	18	47.2	− 3.4	80	11	17	30	52	5.58	+ 1.59	2.34		5	11	11	8	n.	Shelby A. Robert.
Kenton	Obion	325	9	45.4		80	11	15	13	55	7.44		2.26	0.1	10	13	5	12	n.	George S. Martin.
Memphis	Shelby	409	40	47.2	− 4.2	79	11	20	13	35	4.14	− 0.45	1.34	T.	9	14	1	15	sw.	U. S. Weather Bureau.
Milan	Gibson	440	28	43.6	− 4.5	78	11	18	13†	34	4.82	− 0.13	1.64		8	10	3	17	s.	Orlando F. Cantwell.
Trenton	do	345	28	45.6	− 2.4	80	11	15	13	53	4.68	− 0.11	2.48	T.	5	15	4	11	sw.	F. L. Dennison.
Union City	Obion	360	13	45.6	− 4.1	79	11†	12	13	56	4.05	− 0.83	2.05		6	13	11	6		J. B. Kimzey.
Arkansas.																				
Alicia	Lawrence		7	46.4		80	11	12	30	58	3.75		1.90	0	4	6	21	3	n.	McCullough & Guelck.
Amity	Clark	250	19																	J. W. Campbell.
Arkadelphia (near)	do	250	4	48.7		83	11	18	29†	56[a]	3.21		0.76	0	7				nw.	J. A. Ross.
Arkansas City	Desha	145	28								3.74	− 0.02	1.00	0	7					W. C. Blundell.
Batesville	Independence	271	6								4.34		1.65	0	10					Lelia I. Teter.
Bee Branch	Van Buren		19	46.3	− 4.8	79	10†	13	30	61	3.80	+ 0.48	1.25	0	8	15	3	12		J. E. Scanlan.
Benton	Saline	283	4	44.4		83	11	13	30	47[b]				0					s.	P. B. Jackson.
Bentonville	Benton	1,303	6	42.5	− 4.2	80	11	10	12	65	2.30	− 0.69	0.77	2.7	10	16	6	8	s.	U. S. Weather Bureau.
Bergman	Boone	1,324	15	40.1	− 8.0	76	11	5	12	40	1.95	− 0.79	0.78	T.	6	15	8	7	nw.	John T. Maxey.
Black Rock	Lawrence	250	7								3.33		1.42	0	5					S. J. Howe.
Brinkley	Monroe	226	25	45.2	− 5.6	79	11	16	30	49	4.49	− 0.41	1.74	0	6					H. L. D. Whitson.
Calico Rock	Izard	361	7								2.35		0.85	0	5					W. H. Stoner.
Camden	Ouachita	158	26	50.8	− 1.5	83	11†	14	30	58	2.57	− 1.68	0.78	0	8					R. H. Quarterman.
Center Point	Howard	470	11	50.9	− 4.3	86	11	12	30	62	3.37	− 0.49	1.87	0	6	15	3	12	nw.	J. M. Huddleston.
Clarendon	Monroe	171	7								3.73		1.30	0	10					Mrs. B. E. Bishop.
Conway	Faulkner	309	28	46.8	− 3.1	81	11	15	30	57	3.40	− 0.87	1.38	0	10	14	9	7	nw.	G. H. Burr.
Corning	Clay	293	19																	Jacob Brobst.
Dardanelle	Yell	330	25	45.6		82	11	15	30	47	3.27	− 0.25	1.15	0	10					A. Bernard.
Dodd City	Marion	1,175	30	44.4	− 3.2	78	11	12	12	65[a]	2.10	− 1.09	0.81	0.5	6					Neal Dodd.
Dutton	Madison		9	42.8		78	11	6	30	67	3.13		0.95	T.	7	13	5	12	s.	J. M. Ricketts.
Eldorado	Union	265	7	49.9		82	11	18	30	40[a]	3.33		0.90	0	8					Jeff J. Babb.
England	Lonoke		5	50.0		80	11	18	30	44[c]	3.67		1.30	T.	6					J. C. Chenault.
Eureka Springs	Carroll	1,465	9	45.1		83	11	10	29	69	2.37		0.84	2.0	7	15	11	4	sw.	George W. Nicholds.
Fayetteville	Washington	1,451	22	44.6	− 3.8	81	11	9	12	39	2.51	− 0.68	0.80	1.0	8	16	9	5	sw.	University of Arkansas.
Fordyce	Dallas			50.7		82	11	19	29†	54	3.46		0.80	0	7	16	6	8	s.	A. Tredick.
Fort Smith	Sebastian	481	29	46.2	− 3.7	85	11	16	30	63	2.03	− 1.25	0.92	T.	7	17	3	10	e.	U. S. Weather Bureau.
Fulton	Hempstead	264	7								2.28		1.00	0	5					B. C. Logan.
Hardy	Sharp	643	13	44.8	− 4.9	78	11†	14	12†	64	2.67	− 0.27	0.64	T.	8	10	8	12	sw.	C. A. Caywood.
Helena	Phillips	182	26								3.14	− 1.59	0.76	0	8					B. F. Modisett.
Hot Springs	Garland	600	5	49.4		82	11	20		58[b]	1.99		1.27	0	7	17	9	4		Hot Springs Water Co.
Huttig	Union	85	4	52.4		83	11	18	30	53[a]	3.12		1.14	0	8	7	13	10		C. A. Berry.
Jonesboro	Craighead	345	16	44.8	− 6.6	80	11	13		60[a]	4.71	+ 1.22	2.14	T.	10				sw.	Benedictine Sisters.
Junction	Union		18	51.4	− 1.9	82	11	17	30	42	1.41	− 2.63	0.54	0	3	16	3	11	n.	J. A. Lowderback.
Lake Farm	Jefferson	195	4	48.2		81	12	14	30	60	2.87		0.80	T.	6	15	2	13	s.	R. H. Gillispie.
Lewisville	Lafayette	262	8	52.2		83	10	16	30	50	2.69		1.10	0	7	16	5	9		F. W. Youmans.
Little Rock	Pulaski	357	32	47.0	− 4.5	81	11	19	30	49	4.00	− 0.59	1.63	T.	9	14	4	12	nw.	U. S. Weather Bureau.
Lutherville	Johnson	775	14	46.0	− 4.5	81	11	15	29†	62	3.87	− 0.01	0.99	T.	9	14	6	10	e.	W. R. Hentschel.
Malvern	Hot Springs	277	24	49.1	− 2.8	81	11	17	30	46	4.84	+ 0.05	1.20	T.	9					Mrs. L. C. Smith.
Mammoth Spring	Fulton	512	7	42.5		77	11	10	30	46	3.09		1.02	0.1	6	12	11	7		F. Wallick.
Marked Tree	Poinsett	229	7								3.10		1.95	T.	6					L. Smith.
Mena	Polk	1,100	25	48.0	− 3.6	80	11	14	29	59	3.56	− 0.04	1.64	T.	9	19	4	7	w.	R. R. St. John.
Newport	Jackson	231	27	43.6	− 6.7	75	16	16	29	43	4.42	− 0.45	1.78	0	7					Chas. Sprigg.
Ozark	Franklin	377	20																	R. M. Adams.
Pine Bluff	Jefferson	215	23	47.8	− 5.0	78	11†	18	30	43	3.71	− 0.38	1.10	0	6					J. M. Hudson.
Pocahontas	Randolph		19	44.8	− 3.3	78	11	14	30	60	3.99	+ 0.35	1.40	0	8	13	8	9		Benedictine Sisters.
Pond	Benton	1,250	14	42.8	− 5.4	80	11	9	12	50	2.30	− 0.51	1.05	1.0	8	12	10	8	sw.	A. F. Stevens.
Portland	Ashley	122	2	49.9		83	11	18	30	46	3.31		0.90	0	7					T. A. Corson.
Prescott	Nevada	327	23	49.2	− 3.7	85	11	15	30	46	3.18	+ 0.10	0.95	0	7					A. M. Ellsworth.
Rogers	Benton	1,385	20	43.4	− 4.6	81	11	9	12†	51	3.35	+ 0.43	1.09	1.0	8	16	6	8	sw.	Carl A. Stark.
Springbank	Miller	182	4								2.29		0.82	0	8					G. Field.
Stuttgart	Arkansas	195	24	49.8	− 1.0	81	11	15	30	53	3.37	− 1.18	0.96	0	6	14	9	7	ne.	H. A. Buerkle.
Subiaco	Logan	1,050	14	46.6	− 5.3	86	11	16	12	50	2.97	− 0.09	0.93	T.	7	18	5	7	ne.	New Subiaco Abbey.
Swain	Newton	2,300		40.2		73	11	7	12	36	3.71		0.77	T.	12	13	11	6	sw.	George Paxton.
Texarkana	Miller	332	27	51.8	− 3.1	81	11	21	29†	54	2.57	− 0.63	1.00	0	6					D. E. Moore.
Warren	Bradley	304	16	49.4	− 4.0	82	11	18	30	42	3.52	− 0.27	0.83	0	7					W. J. Savage.
Whitecliffs	Little River	206	7								3.04		1.83	0	5					John E. Payton.
Wiggs	Garland		18	47.8	− 4.5	83	11	13	13	59	3.84	− 0.07	1.96	T.	8	14	8	8	nw.	S. D. Jester.
Wynne	Cross	250	3	43.6		73	10	17	13†	36[a]	2.55		1.05	0	10					John Seals.
Mississippi.																				
Anguilla	Sharkey	107	3	51.8		84	11	18	30	48	4.67		0.83	T.	6	18	4	8	sw.	E. W. Cook.
Austin	Tunica	200	15	48.6	− 3.7	80	11	14	30	45	3.60	− 1.98	0.91	T.	7	17	2	11	nw.	H. J. Irvine.
Batesville	Panola	230	24	46.8	− 4.6	81	6†	16	30	43	3.98	+ 0.21	1.05	0	7	21	3	6	n.	J. M. Cox.

TABLE 1.—*Climatological data for November, 1911. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Mississippi*—Contd.**																				
Big Creek	Calhoun			50.8		82	11	15	30	43	4.03		1.60	T.	6	14	4	12	n.	J. P. Havens.
Byhalia	Marshall	390	2								3.35		0.80	0	5	16	7	7	n.	Tallahatchie Drainage Com.
Canton	Madison	228	21	52.4	− 3.2	84	11	20	30	42	4.48	+ 1.39	1.77	0	10	12	10	8		Dr. G. W. Smith-Vaniz.
Charleston	Tallahatchie		1	47.6		87	11	12	30	48	3.62		0.92	0	6					W. B. Burke.
Clarksdale	Coahoma	177	4	47.4		81	11	17	30	44	3.03		0.58	0	9	13	0	17	ne.	A. C. Tuttle.
Cleveland	Bolivar	160									3.15		1.10	T.	5					W. W. Boone.
Coffeeville	Yalobusha	241	2								3.90		1.12	0	7	16	8	6	s.	Tallahatchie Drainage Com.
Corinth	Alcorn	470	23	45.9	− 4.6	78	7	16	30	42	3.92	− 0.11	1.26	T.	8	15	0	15	se.	M. A. Chandler.
Crenshaw	Panola	187	2								2.83		0.71	T.	10	14	8	8	se.	Tallahatchie Drainage Com.
Denmark	Lafayette		2								2.97		0.90	0	9					Do.
Duck Hill	Montgomery		12	48.6	− 5.6	81	6	16	30	51	3.55	+ 0.53	0.93	T.	5				s.	W. H. Eskridge.
Edwards	Hinds	222	24	54.4	− 2.2	85	11	20	30	42	4.75	+ 1.50	1.75	0	9	14	11	5	s.	E. F. Farr.
Enid	Tallahatchie		2								3.47		1.34	0	7				nw.	Tallahatchie Drainage Com.
Fayette	Jefferson	270	10	53.0	− 3.1	85	11	18	30	39	5.61	+ 1.24	1.92	0	7	14	10	6	s.	T. L. Darden.
Greenville	Washington	126	24	50.2	− 4.1	82	11	21	30	39	3.62	− 0.07	1.14	T.	8	16	1	13	ne.	F. L. Harbison.
Greenwood	Leflore	140	11	48.8	− 5.1	82	19	18	30	49	4.02	+ 0.53	0.90	0	8	12	5	13	s.	J. H. Stephen.
Grenada	Grenada	194	2								3.47		1.05	0	7	21	4	5	nw.	Tallahatchie Drainage Com.
Hernando	De Soto	391	23	46.9	− 4.9	80	11	16	30	52	3.19		0.65	T.	9	14	5	11	n.	W. F. Wood.
Hickory Flat	Benton	435	2								3.62		1.10	0	13	11	12	7	s.	Tallahatchie Drainage Com.
Holly Springs	Marshall	600	24	45.2	− 5.0	78	11	12	30	38	3.64	− 0.15	1.11	T.	10	13	3	14	se.	L. B. Mosby.
Kosciusko	Attala	430	21	48.9	− 5.0	84	11	16	30	43	4.06	+ 1.09	1.41	0	8	5	7	8	ne.	E. L. Lucas.
Lake Cormorant	De Soto	206	2								3.17		0.97	0	7	13	17	0	ne.	Tallahatchie Drainage Com.
Lula	Coahoma	182	2								3.09		0.73	0	6	13	6	11		Do.
Malone	Marshall		2								3.76		1.47	T.	12					Do.
Marks	Quitman	163	2																	Do.
Natchez	Adams	206	23	51.7	− 6.8	89	11	19	30	44	5.90	+ 1.78	2.02	0	8	8	5	17	n.	F. L. Garrity.
New Albany	Union	398	2								3.19		0.84	T.	7	14	12	4	n.	Tallahatchie Drainage Com.
Pontotoc	Pontotoc	475	22	49.2	− 3.3	80	11	17	30	48	3.25	− 0.19	1.20	0	8	11	12	7	nw.	Dr. C. W. Bolton.
Port Gibson	Claiborne	116	23	50.2	− 5.7	84	11	18	30	44	4.97	+ 1.41	1.83	0	8	14	2	14	e.	H. H. Crisler.
Rosedale	Bolivar	143	3	47.8		80	6†	19	30	44	3.01		0.75	0	8	10	4	16	nw.	T. J. Murray.
Senatobia	Tate	284	2								3.75		1.53	0	11	8	0	22	n.	Tallahatchie Drainage Com.
Shoccoe	Madison		8	52.4		84	6	15	30	46	3.80	+ 1.61	1.57	0	6	18	3	9	s.	J. C. Pitchford.
Suffolk	Franklin		10	55.0	− 3.4	84	11	21	30	44	5.37	+ 1.93	1.60	0	10	13	8	9	n.	Prof. George H. Kent.
Swan Lake	Tallahatchie	184	6																	W. J. Hawkins.
Tchula	Holmes	130	6	52.2		84	11	16	30	46	3.68		1.50	T.	6	9	16	5	n.	Dr. M. P. Winkler.
University	Lafayette	502	18	48.5	− 4.2	80	11	15	30	52	3.72	− 0.13	0.90	0	7	12	13	5	s.	Prof. J. H. Dorroh.
Utica	Hinds	287	7	52.4		84	6†	17	30	42	4.27		1.53	0	7	16	2	12	n.	Dr. J. B. Dudley.
Vicksburg	Warren	247	40	53.1	− 2.8	83	11	23	29	44	4.83	+ 0.64	2.22	0	9	13	8	9	se.	U. S. Weather Bureau.
Water Valley	Yalobusha	300	22	49.8	− 3.1	81	11	16	30	39	5.14	+ 1.55	1.50	0	6	13	11	6	sw.	Miss Loula Erikson.
Woodville	Wilkinson	560	18	55.5	− 2.5	84	17	22	30	35	5.27	+ 1.51	1.80	0	7	16	8	6	n.	James E. Lee.
Yazoo City	Yazoo	116	17	49.6	− 5.4	83	11	18	30	38	4.41	+ 1.43	2.10	0	5	18	3	9	n.	W. H. Courts.
Louisiana.																				
Abbeville	Vermilion	18	23	56.9	− 4.0	84	10†	22	30	39	4.12	+ 0.69	1.02	0	7	17	2	11	n.	C. J. Edwards.
Alexandria	Rapides	77	23	52.2	− 4.8	86	11	20	30	38	6.11	+ 1.82	2.35	0	7	13	1	16	n.	Nellie Graham.
Amite	Tangipahoa	130	23	54.1	− 4.4	84	17	20	30	40	4.05	+ 0.71	1.95	0	6	10	12	8	n.	Lulu M. Wentz.
Antioch	Claiborne																			W. L. Anglin.
Avoca Island	St. Mary			58.2		85	7	27	30	42[b]	3.30		2.00	0	5	15	7	8		J. N. Pharr & Sons.
Baton Rouge	East Baton Rouge	60	23	56.9	− 2.7	85	10†	24	30	39	3.61	− 1.09	0.97	T.	12	11	4	15	ne.	Elmo M. Bott.
Burnside	Ascension	20	11	57.6	− 2.9	87	6	25	30	42	3.80	+ 1.37	1.80	0	4	17	7	6		C. S. McFarland.
Burrwood	Plaquemines	1	23	63.0	− 3.1	84	10†	36	29	23	2.42	− 0.10	1.50	0	6	13	10	7	sw.	Graham Myers.
Cades	St. Martin		1	58.2		86	10	21	30	37	3.36		1.00	0	6	16	4	10	n.	C. E. Smedes.
Calhoun	Ouachita	180	23	52.1	− 2.8	84	11	17	30	49	4.72	+ 0.88	1.51	0	9	12	12	6	n.	N. Louisiana Exp. Station.
Cameron	Cameron	6	18																	State Biological Station.
Carrollton	Orleans	7																		Loyola College.
Cheneyville	Rapides	67	23	54.8	− 2.8	86	11	20	30	43	7.00	+ 3.09	2.60	0	6	13	0	17	n.	Walter I. Tanner.
Cinclare	West Baton Rouge		1	54.8		85	11†	22	29	40	5.35		1.25	0	7	5	7	18	ne.	Cinclare Central Factory.
Clinton	East Feliciana	113	23	55.0	− 3.4	85	17	22	30	42	3.56	+ 0.61	0.98	0	8	10	4	16	n.	John A. White.
Collinston	Morehouse	65	10	54.8	− 0.8	85	11	16	30	48	3.83		1.35	0	6	14	6	10	s.	John B. Reily.
Columbia	Caldwell	137																		H. W. Blanks.
Covington	St. Tammany	39	19	54.8	− 1.2	84	11	21	30	45	4.07	+ 1.28	1.60	0	8	12	4	14	n.	Lucille Champagne.
Dodson	Winn		2	53.4		85	6†	17	30	43	4.96		1.65	0	7	15	3	12	n.	J. P. Lucas.
Donaldsonville	Ascension	33	23	61.4	0.0	92	11	25	30	39	5.85	+ 2.36	3.60	0	8	17	1	12	n.	John F. Park.
Dutchtown	do										3.65		1.85	T.	4	19	6	5		Picard & Geismer (Ltd.).
Farmerville	Union	177	23	50.2	− 4.9	83	10†	11	29	41[m]	3.86	− 0.26	1.25	0	6	11	6	13	s.	W. P. Chandler.
Ferriday	Concordia		4																	R. Z. Sciater.
Franklin	St. Mary	10	19	57.3	− 3.7	88	10	23	30	42	3.83	+ 0.30	1.51	0	12	12	5	13	ne.	J. M. Bonney.
Grand Cane	De Soto	302	17	50.5	− 6.0	84	6	18	29	51	4.10	− 0.13	1.98	0	6	14	3	13	ne.	G. Foster Provost.
Grand Coteau	St. Landry	93	23	57.1	− 2.9	85	17	21	30	42	4.54	+ 0.98	1.45	0	6	15	8	7	nw.	St. Charles College.
Hammond	Tangipahoa	44	19	56.1	− 2.7	87	17	19	25	50	4.13	+ 1.12	1.19	0	7	19	6	5	nw.	C. C. Carr.
Houma	Terrebonne		23	60.6	− 0.2	90	10	21	30	52	4.33	+ 1.65	2.20	0	6	19	0	11	ne.	J. M. Foote
Jena	La Salle			54.8		87	6	18	30	43[c]	5.80			0	5	9	13	8	n.	I. A. Wilbanks.
Jennings	Calcasieu	30	14	55.6	− 4.6	85	10	23	30	38	3.32	+ 0.02	1.22	0	8	7	15	8	se.	J. F. Buch.
Laark	Morehouse																			P. M. Donley.
Lafayette	Lafayette	36	23	56.0	− 4.0	86	6†	22	30	47	3.66	+ 0.21	0.81	0	11	10	5	15	n.	J. J. Davidson.
Lake Charles	Calcasieu	22	23	54.4	− 5.1	85	6†	20	30	56	2.77	− 1.69	1.38	0	3	13	0	17	n.	George Boudreaux.
Lakeside	Cameron	9		53.6	− 8.2	82	10	25	30	24	5.15		1.74	0	8	19	4	7	n.	L. J. Nunemacher.
La Rose (near)	La Fourche			58.4		88	6	23	30	36	4.53		3.20	0	6	22	4	4	n.	Louisiana Delta Farms Co.
Lawrence	Plaquemines	6	20	60.4	− 1.4	89	6	26	30	49	5.41	+ 2.82	3.00	0	6	16	5	9	ne.	H. C. Warmoth.
Leesville	Vernon		4																	C. M. McFarland.
Liberty Hill	Bienville		23	54.2	− 2.4	86	6†	16	30	48	4.40	0.00	1.80	0	5	17	1	12	n.	F. A. Crawford.
Logansport	De Soto	192	7								4.44		1.94	0	5	9	1	20	n.	Bettie M. Dennis.
Melville	St. Mary	45	23	53.5	− 5.5	85	6	16	30	49	3.54	+ 0.11	1.08	0	8	13	1	16	n.	Charles B. McNeill.
Merryville	Calcasieu																			A. P. Windham.
Minden	Webster	194	23	50.2	− 4.8	83	10†	12	29†	47	3.15	− 0.90	1.50	0	6	10	11	9	s.	Ethel Fort.
Monroe	Ouachita	82	23	51.6	− 5.1	82	10†	21	30	54	4.66	+ 0.89	1.80	0	5	9	0	21	s.	L. L. Smith.
Morgan City	St. Mary	14	5								3.94		2.53	0	8	10	5	15	n.	Virgil E. Kinsey.
Newellton	Tensas		4	54.1		85	6	18	30	46	4.89		1.70	0	6					John D. Fultz.
New Iberia	Iberia	15	23	58.4	− 2.9	85	6	24	30	36	2.75	− 0.53	1.05	0	6	11	5	14	n.	Mrs. John A. Gebert.
New Orleans (1)	Orleans	51	40	58.9	− 1.7	89	6	31	29	36	4.08	+ 0.29	2.52	0	6	13	8	9	n.	U. S. Weather Bureau.
New Orleans (2)	do	18	23	59.3	− 1.4	90	10	28	30	38	4.48	+ 1.43	2.73	0	9	2	7	21	n.	Sugar Experiment Station.
Opelousas	St. Landry	83	19	55.6	− 3.8	87	17	21	30	44	4.86	+ 1.90	1.59	0	10	13	4	13	n.	Andrew Moresi.
Paradis	St. Charles										0.97		0.57	0	2					R. E. Boyce.
Pearl River	St. Tammany	29	5								3.98		1.94	0	8	16	3	11	n.	George F. Bancks.
Plain Dealing	Bossier	268	19	52.2	− 2.8	94	11	15	30	44	3.35	− 0.09	1.49	0	6	14	6	10	ne.	Leon Sanders.

TABLE 1.—*Climatological data for November, 1911. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.*	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Louisiana*—Contd.**																				
Rayne	Acadia	44	19	57.6	− 3.1	86	10†	20	30	45	3.44	− 0.47	1.00	0	12	16	0	14	n.	A. P. McNeil.
Reserve	St. John Baptist		10	58.6	− 0.3	92	17	24	30	48	2.91	+ 0.88	2.12	0	4	15	11	4		Leon Godchaux Co., Ltd.
Robeline	Natchitoches	147	15	51.8	− 4.5	86	10	15	30	44	4.47	+ 0.97	2.15	0	4	14	2	14	e.	Ruby McCook.
Ruston	Lincoln	312	16	57.2[a]	− 0.2	86	16†	22	11†	60[a]	3.40	− 0.57	1.80	0	2	25	1	4	n.	R. A. Clampet.
St. Francisville	West Feliciana	115	8	54.6		81	20	22	30	47	3.09		1.37	0	3	13	13	4	n.	L. P. Kilbourne.
Schriever	Terrebonne	17	19	59.2	− 1.9	89	10	24	30	50	4.27	+ 1.46	2.25	0	5	18	3	9	e.	Harriet F. Riveire.
Sheridan	Washington		1	55.6		84	11	19	30	45	3.05		1.27	0	6	14	6	10	n.	D. A. Self.
Shreveport	Caddo	249	40	52.4	− 2.9	83	11	22	29	41	2.66	− 1.42	1.13	0	8	14	5	11	se.	U. S. Weather Bureau.
Simmesport	Avoyelles	42	5								5.32		2.13	0	9	0	4	26	n.	C. T. Leigh.
So. University Farm	Jefferson		14								4.33	+ 1.73	2.75	0	6	17	5	8	se.	F. L. St. Martin.
Sugartown	Calcasieu		18	56.4	− 2.1	83	11†	25	30	31	6.81	+ 2.89	2.30	0	5	4	23	3		G. W. Richardson.
Talluiah	Madison	91	4	49.8[1]		85	6	17	30	49[1]	3.03		2.30	0	3					Neal T. Halt.
Walker	Livingston		1	55.6		85	17	20	29	47	4.28		1.60	0	5	10	5	15	ne.	H. C. Fondren.
Winnsboro	Franklin	57																		J. C. Carlton.

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
* Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1911. District No. 7, Lower Mississippi Valley.*

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Colorado.																															
Buena Vista	Arkansas									T.		T.		T.								*	.63								0.63
Calhan	Big Sandy																														
Canon City	Arkansas	*	.10				T.					.14												.10			T.	T.			0.34
Colorado Springs	Fountain	.02	.09	.02					T.	T.		.10											.03	T.			.02	T.			0.28
Cripple Creek	Oil Creek								.02			.09											.30				.01	.13			0.55
Cucharas Camps	Cucharas	.59				.03			T.			T.							.08				.72				.17	.81			2.40
Eads	Big Sandy																														
Fairview	St. Charles																														
Fremont Experiment Station.	Fountain	.02				T.		.01		.07	T.				T.	T.					T.	.23				.28	T.				0.61
Garfield	Little Arkansas	T.	.25			.08	T.		.25	.55		.17			.09		T.	.03					.10	.06			T.	.14			1.72
Hamps	Big Sandy		.05									.10											.04					.02			0.21
Hermit Lake	Grape Creek		.40			.05				.42		.70					.40						.15	.55				.92			3.59
Hoehne (near)	Purgatoire		.27									.10						T.					.03	.03			.05	.17			0.55
Holly	Arkansas	.35	.20									.05																T.			0.60
La Junta	do																														
Lake Moraine	Fountain	.02				T.				.13		.12					T.						.30	.02			.06	.02			0.67
Lamar	Arkansas	.15										.09																			0.24
Las Animas	do	.15	.23			.12						.43					T.						.11								1.04
La Veta Pass	Cucharas																														
Leadville	Arkansas		.02			.10	.02		.15	.19	.01	.28			.10		.01	.02	T.				T.				.02	.06			0.98
Limon (near)	Big Sandy																														
Madrid	Purgatoire	.01	.22							.03		.03					.02						.07					.17			0.55
Marshall Pass	Arkansas																														
Monument	Fountain		.10			.18																							.37		0.65
North Lake	Purgatoire	T.	.24			T.			.17	.23		.41						T.					T.	.61				.40			2.06
Pueblo	Arkansas	.04	.01						T.			.18											.07				.01				0.31
Rocky Ford (near)	do					T.						.20											T.								0.20
St. Elmo	Chalk Creek		.30			.18			.16	.63		.25			.12		.05	T.					.28	.12			.06	.06			2.21
Salida	Arkansas		.05							.05		T.												.35				.05			0.50
Santa Clara	Huerfano	.04	.07			T.			T.			.25					T.	.10					.10	.29			T.	.63	.09		1.57
Sheridan Lake	Arkansas	T.		.24																										T.	*0.24
Stonewall	Purgatoire		.30							.22		.15											.05	.23				.18			1.13
Trinidad	do	.04	.23							.05		.05						.02					.05	.30			.39		.18		1.31
Two Buttes	Cimarron																														
Victor	Oil Creek					T.						.07											.11	.08			T.				0.26
Vilas	Cimarron															.50												.75			1.25
Wayne	Arkansas																														
Westcliffe	Grape Creek	T.				T.						.03				T.							*	.10				.12	.03		0.28
Winfield	Clear Creek	T.	.01			.03	T.	T.	.08	.18	.02	.02			.01		.02						.14	.01			T.	.01			0.53
Woodman Sanitorium.	Fountain	.06	.10			.04						.06											T.	.05			.06	.08			0.45
Wortman	Arkansas			T.	T.	.15	T.	.21	.80	.25	.15	T.	T.	T.	T.	T.	.21	T.	.23	T.							T.	.50	T.			2.50
New Mexico.																															
Abbott	Canadian		.35																					.04							0.39
Albert	do																														
Aurora	do		.32			.06			.18	.04		.14					.05						.19					.05			1.03
Bell Ranch	do	.05	.25																												0.30
Black Lake	do		.27			T.			.13	.17		.10					T.						.13					.14			0.94
Cabeza	do	.20	.40																					T.							0.60
Campana	do	.20	.02																								.05				0.27
Chacon	do	.10	.70			.20						.80											.12	.35				.06			2.33
Cimarron (near)	do	.21	T.							T.		T.											.10					T.			0.31
Clayton	do																														
Clovis	Red	*	.25																												0.25
Cuervo	Canadian	.02	.46			T.																		.01				T.	T.		0.48
Dawson	do		.48																					.10							0.59
Elizabethtown	do		.32			.02	.13		.06	.10													.02	.17				.19			1.01
Folsom	Dry Cimarron	.03	.08						T.			T.						.06					T.	.18				.44	T.		0.79
Fort Union	Canadian		.36									T.											T.					T.			0.36
Hayden	do		.30																									T.			0.30
Hoosier Ranch	do	.10																					T.								0.10
Johnsons Park	do		.17									T.															*	.25			0.42
Kappus	do		.25																				T.								0.25
Lake Alice	do																														
Logan	do		.23																												0.23
Lykins (near)	Red		.26																								.08				0.34
Maxwell (near)	Canadian	.10																									T.				0.10
Melrose	Red	.03	.21			.03																						.08			0.35
Miami Ranch	Canadian		.18																				.03								0.21
Mills (near)	do	*	.25																					T.							0.25
Montoya	do	*	.25																												0.25
Mount Dora (near)	do	*	.16																					T.				.07			0.23
Nara Visa	do		.23																										T.		0.23
Ocate	do																														
Palo Verde	do	.02	.23																				.04								0.29
Pasamonte	do	*	.16																												0.16
Pleasant View	do	.10							.04															.05							0.17
Portales	Red	T.	.24	T.		.25																						.10			0.59
Raton	Canadian	*	.32																										.16		0.48
Rociada	do		.86																					.28				.11			1.25
Rosebud	do		.06																												0.06
Roy	do	.32	.20																												0.52
Roy (near)	do	.08																					.01								0.09
San Jon	do		.15																									.33			0.48
Solano	do	.08	.04																					.04							0.16
Springer	do	T.	.16																					.08							0.24
Taylor	do		.32																				.05								0.37
Trementina	do																														
Tucumcari	do	*	.20																									.20			0.40
Valley	Dry Cimarron	*	.40																								*	.07			0.47
Vance (near)	Canadian	T.	.16																									.01			0.17
Vermejo Park	do		.24							T.				.05										.08			.08				0.45
Wagon Mound (near)	do	*	.40																					T.							0.40
Texas.																															
Amarillo	Canadian	.08	.33	T.	T.	.12																					.06	.35			0.94
Archer City	Red		T.			.54																	T.								0.54
Arthur City	do						.65						.20										T.	2.00							2.85
Bonham	do					.33			.13				.30					T.					.62								1.38

TABLE 2.—*Daily precipitation for November, 1911. District No. 7*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
***Texas*—Continued.**																																
Canadian	Canadian	.09		.25		.10																						.20				0.64
Childress	Red		.20																									.05				0.25
Chillicothe	do		.10			.60																										0.70
Clarendon ‖	do		.20	.38		.30	.02																					T.	T.			0.90
Clarksville	do																															
Claude	do		.25																									T.	T.			0.25
Dalhart ‖	Canadian																															
Denison ‖	Red				.04	.15	.10		.15	.03			.03											10								0.60
Finley ‖	do								.56										.36					53								1.45
Henrietta ‖	do			.20		.27	.44		T.															50								1.41
Hereford	do																															
Memphis	do	.20				.75																						.05				1.00
Miami	Canadian	.11	.35			.48							T.															.10				1.04
Mobeetie ‖	Red																															
Nazareth	do																															
Ochiltree	Canadian		.40			.20																				.05						0.65
Pampa	do																															
Panhandle	do	.20	.20																									.10				0.50
Paris ‖	Red			T.	.02	.17	.28		.20	.03		T.	.15					.05	.03					68					T.			1.61
Plemons	Canadian	.12	.40			.05																						.40				0.97
Quanah ‖	Red		.10			.30																						.02				0.42
Ringo Crossing ‖	do									.63								.32						72								1.67
Romero	Canadian		.25	.10																								.03				0.38
Sherman ‖	Red			T.	T.				.65	.04																		T.	T.			0.69
Stratford	Canadian	T.	.20									T.																T.	T.			0.20
Sulphur Springs	Red																															
Texline	Canadian		.15																									.10				0.25
Tulia	Red	.16	.50		.40																							.30	T.			1.36
Wichita Falls	do					.62																										0.62
Winfield	do					.08			.54			.05						.53				.45										1.65
Kansas.																																
Aiden	Arkansas	.55	.03			.11	.65					T.																T.				1.34
Anthony	do	.20		.02		.57						T.																.25				1.04
Ashland	Cimarron	.45	.30	.11	T.	.05	T.					T.																.05	T.			0.96
Burlington	Neosho					.87						T.					T.											.33				1.20
Chanute	do	T.		T.		.52	T.				T.	T.	.13					.10					T.	.10				.18				1.03
Cimarron	Cimarron	.49	.13	T.	T.	T.	.14					.01																.10				0.87
Coldwater	do	.21	.07	T.		T.						T.																.10				0.38
Columbus	Neosho			.02		.96						.48					T.	.25					.76	.43				.08	.01			2.99
Coolidge	Arkansas	.12										.06																.04				0.22
Cottonwood Falls	Neosho			.14		.23	.60					T.						.07										.02				1.06
Council Grove	do	.20		.05		.07	.32					T.						.09										T.	T.			0.73
Cunningham	Arkansas	.38		.02		.12	.20					T.																.02				0.74
Dodge City	do	.53	.13			.15						.02																.16	T.			0.99
El Dorado	do	.10		T.		.28	.15					T.																.25				0.78
Ellinwood	do	.46	T.	.02		.26	.29					T.																T.	T.			1.03
Emporia	Neosho	.05		.05		.33	.57					T.																.23				1.23
Eureka	Verdigris	T.	T.	T.		.58						T.																.20				0.78
Fall River	do			T.		.50																	T.	.35				.30		.30		1.45
Fargo	Cimarron	.30			.50	T.						T.																.20				1.00
Fredonia	Verdigris	T.		.01		.54	.03		T.			T.	T.						T.				.15	.08				.15				0.96
Garden City	Arkansas	.50	.30									.05																.10				0.95
Great Bend	do	.58					.45					T.																				1.03
Greensburg	do	.32		.06		.12	.22					T.																.10				0.82
Grenola	Verdigris	T.				.62	.06					T.											.05	.23				.06				1.02
Hess	Cimarron	T.	1.05	T.		.10						T.																T.	T.			1.15
Howard	Verdigris	T.		T.		.58						T.											T.	.40				.18	T.			1.16
Hugoton	Cimarron	.18	.71		.01	T.	.03					.10																.19				1.22
Hutchinson	Arkansas	.54		.07		.09	.45					.02																T.				1.17
Independence	Verdigris			.01		.70	.02					T.	.01					.05					.23	.29				.10	.02			1.43
Iola	Neosho	T.		T.		.64	.02		T.	T.		.06											.23					.28	T.			1.23
Irene	Arkansas	.50	.07																									.08				0.65
Jetmore	do	.12	.12	.08	T.		.30					T.	T.															T.	T.			0.62
Kingman	do	.50		.08		.03	.15					.03																.08				0.87
La Crosse	do	.65	T.			T.						T.																T.				0.65
Lakin	do	.20	.25									.08																.15				0.68
Larned	do	.43	.04	.02		.09	.36					T.																T.				0.94
Lebo	Neosho	T.		.04		.37	.20		T.			T.						.16					T.					.40	T.			1.17
Le Roy ‖	do	T.	T.	T.		.72							T.											T.					.08			0.80
Liberal	Cimarron	.10	.40									T.																.10				0.60
Macksville	Arkansas	.52	T.	.02		.14	.20					T.	T.															T.				0.88
McPherson	do	.34		.07		.03	.62					T.																T.				1.06
Madison	Verdigris	T.				.45	.35					T.	T.		T.													.20				1.00
Marion	Neosho	.17	.05			.07	.52					.01																T.	T.			0.82
Medicine Lodge	Arkansas	.24		.05		.04						.03																.06				0.42
Mount Hope	do	.60		.05		.35																						T.				1.00
Neosho Rapids ‖	Neosho	T.	.11	T.			.66					T.																T.	.40			1.17
Ness City	Arkansas																															
Newton	do	.22		.11		.07	.40					.01																T.				0.81
Norwich	do	.23		T.		.35	.18					T.																.15				0.91
Oswego	Neosho			T.		.78						.15						.32					1.00						.25			2.50
Plains	Cimarron	.42	.20																									T.				0.62
Pratt	Arkansas	.64	.20	.10	T.	.68	.12																									1.74
Richfield	Cimarron	.05	.12																									.15				0.32
Rome	Arkansas	.13		T.		.35	.05					T.											.07					.05	T.			0.65
Sedan	Verdigris			T.		.56						T.											.16	.26				.14	T.			1.12
Toronto	do					.25	.43					T.											T.					.55				1.23
Ulysses	Cimarron	.40	.30																									.40				1.10
Walnut	Neosho																															
Wellington	Arkansas	T.	.01	T.		.30	.08			.01		T.					T.						T.					.45	T.			0.85
Wichita	do	.29	T.	.02	T.	.40	T.					T.											T.					.16	T.			0.87
Winfield	do																															
Yates Center	Verdigris	.03			T.	.63	.16		T.			T.											T.	T.				.70				1.52
Oklahoma.																																
Ada	Canadian			.08		.75						T.											.11					T.	T.	.02		0.94
Alva	Arkansas		.10																									.10				0.22
Apache	Red		T.	.08		.70	T.																					.06				0.84
Arapaho	Washita	.15	.40			.75																						T.	T.			1.30

TABLE 2.—*Daily precipitation for November, 1911. District No. 7*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
***Oklahoma*—Contd.**																																
Ardmore	Red			.10	.08	.22	.50		.05															.10							1.05
Arnett	Canadian		.30			.20																					.20				0.70
Bartlesville	Arkansas			.04		.50						.12						T.					.12	.51			.05				1.34
Beaver	Canadian	.18	.20	T.	.05																						.20				0.63
Blackburn	Arkansas			.02		.68																		.11			.19	.01			1.01
Cache	Red		T.			1.49																									1.49
Calvin	Canadian			.10		.21	.44		.10				.12											.22							1.19
Chandler	do																														
Chattanooga	Red			.08		.76																									0.84
Chickasha	Washita			.02		.52																					T.	T.			0.54
Cloud Chief	do	T.	.10	T.	.48	.48																					.04	T.			1.10
Durant	Red				.02	.17	.14		.17	.05			.20				T.						.05	.14							1.03
Eldorado	do		.11			.30																					T.				0.41
Elk City	do																														
El Reno	Canadian					.38										T.											T.	T.			0.38
Enid	Cimarron		.10	T.		.21	.43																					.20			0.94
Erick	Red	.27	.30																								T.				0.57
Fairland	Arkansas			T.		1.25			T.	T.		.22						.39					.03	.23			.07	T.			2.19
Fort Gibson	do			T.	.10	.11	.65		.04	.05			.34					.05					T.	.48				.07			1.89
Frederick	Red		.05			.69	T.																								0.74
Goodwell	Canadian	.20	.30																								T.				0.50
Guthrie	Cimarron					.50																						.10			0.60
Guymon	Canadian																														
Harrington	Red	.19			.32																						.02				0.53
Hartshorne	Canadian				.55		.24						.50											.50					T.		1.79
Healdton	Red		T.	T.		.65	.05	T.	.10													T.	T.				T.	T.			0.50
Helena	Cimarron	.16	T.			.45																					.15				0.76
Hennessey	do	T.	T.			.70																					.15	T.			0.85
Hobart	Red	T.	T.	.10		.42																	T.				.06				0.58
Holdenville	Canadian			.05			.60																	.09				T.			0.74
Hooker	do	.10	.30				.04					.05															.10				0.59
Hurley	Cimarron	.20	.40									T.															.10				0.70
Idabel	Red																														
Jefferson	Arkansas	.06				.67																					.11				0.84
Kenton	Cimarron	T.	.10			T.					T.	T.															T.	T.			0.10
Kingfisher	do	.12	.07			.34																	T.				.05	T.			0.58
McAlester	Canadian			T.		.79						.64											.44	.46			T.	T.			2.33
McComb	do																														
Mangum	Red		.10			.35																						.03			0.48
Marlow	Washita																														
May	Canadian																														
Meeker	do			.10		.85																		.30			T.	T.			1.25
Muskogee	Arkansas			T.	T.	.72			T.			.30											T.	.50			T.	T.			1.52
Mutual	Canadian	.23				.28																					.10				0.61
Neola	Washita		T.	.11		.19																					.04	.01			0.35
Newkirk	Arkansas	T.				.40																	.21				T.	T.			0.61
Norman	Canadian	T.	T.	.03		.72																	.42				.08	.02			1.27
Oakwood	do	.23	.07	.05		.46																	T.				.10				0.91
Okeene	Cimarron	.14	.01	.05		.47																					.10				0.77
Oklahoma	Canadian	T.	T.	.04		.45																					.03	.02			0.54
Okmulgee	do			T.		.87						.10											.10				T.	T.			1.07
Pauls Valley	Washita					.42																	.16				T.	T.			0.58
Pawhuska	Arkansas																														
Perry	do	T.	T.			.41						T.											T.				.15	T.			0.56
Ravia	Washita					.65			.15																						0.80
Sac and Fox Agency	Canadian			.05		1.00																					.05	.15			1.25
Shawnee	do				.08	.19	.51																T.	.02				T.	T.		0.80
Snyder	Red		T.	.08		.57																									0.65
Stillwater	Cimarron			T.		.48	.05						T.				T.						T.	.18				.10			0.81
Tulsa	Arkansas			.07		.12	.80			T.			.05					.03						.05				.03	T.		1.15
Vinita	do					1.13						.40											.42					T.			1.95
Wagoner	do																														
Waukomis	Cimarron	.12	T.	T.		.58																					.10	T.			0.80
Waurika	Red			.03	.03	.74	T.		T.														.09								0.89
Weatherford	Canadian	T.	T.	.18			.40																								0.67
Webbers Falls	Arkansas						.70		.10				.50											.90	.50							2.70
Whiteagle	do		T.			.45																	.11				.10	T.			0.66
Woodward	Canadian		.20			.17																					.15				0.52
Missouri.																															
Belle	Meramec					.45						.40	.10					1.10					.35	.45			.30	.20			3.35
Birchtree	Black				.07	.36	.62						.98					.30						.72			.12				3.17
Cardwell	Mississippi					.30	.90											.55					1.25								3.18
Caruthersville	do			T.	.20	.05	1.80			T.	T.	T.	.53					.47						.80			T.	T.	T.		3.85
Cassville	White				.01	1.12						.42						1.07					.55					.05			3.22
Dean	Neosho	1.41				1.41			.02	.03			.15				.01	.28					.11	.23			.12	.02			3.79
Doniphan	Black				.40	.50	.80				T.		.50					.46						.39			.48	T.	T.		3.53
Gano	Meramec					.50	.15						.74					.41		.11	.80			.44			.10	.11	T.		2.56
Goodland	Black						.80						.80					.20		.14				.31				.27			2.52
Greenville	Mississippi																														
Hollister	White					.95	.10						.60					.20						.60				T.			2.45
Ironton	Mississippi						.95				T.	T.	.53			T.		.06	.14	.20				.35		T.		.45	T.		2.68
Jackson	do				.03	.86						.72						.36	.03					.50				.15			2.68
Joplin	Neosho					1.18						.43					.16							1.00				.15			2.92
Koshkonong	Black				.28	.35	.62						.36					.22					T.	.83			.15	.03			2.84
Lamar	Neosho				T.	T.	.83			T.			.26					.87					T.	1.22					.02	T.	3.20
Marble Hill	Mississippi					.55	.55											.15						.65				.25			2.15
Mountaingrove	White				T.	.70	.27			T.		T.	.72					.32				.24					.16	.04			2.45
Mount Vernon	Neosho					.87	.04					.45					T.	.30					.48				T.	.45			2.59
Neosho	do					1.08	.07					.48					T.	1.34					.37	.45			.04	.20			4.03
New Madrid	Mississippi					.26	1.65						.80						.44					.86	.26			.20	.02		4.49
Oakfield	Meramec					.39	.41				T.	.70	.10		T.			.49		T.			.30	.32			.23	.05	.03		3.02
Olden	White				.35	.48							T.											2.15							2.98
Rolla	Meramec					.57	.13				T.	.90	.10		T.			.09		T.			.52	.50	T.		.18	.07			3.06
Springfield	White				T.	.62						.45			T.		T.	.56					.38				.13	.02			2.16
Steelville	Meramec																														
Kentucky.																															
Blandville	Mississippi			T.	.66	.29	1.68			T.	T.	T.	.64					.43						.88				.15			4.73
Lynnville	do																														

TABLE 2.—*Daily precipitation for November, 1911. District No. 7*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Tennessee.																														
Arlington ‖	Mississippi						.80		.08	.25		.05	.48						.68				.48	.62				.41			3.85
Bolivar ‖	do						1.32		T.	.12		.02	.36					1.15					1.00	.33				.45	T.		4.75
Brownsville ‖	do						2.00						.15						.78				.90	.15							3.98
Covington ‖	do						2.45			T.	T.	*	.50						1.20				.80	.30				.10			5.35
Dyersburg ‖	do						2.34						.54					1.20					1.00				.50				5.58
Jackson	do				.10	.03	2.17		.06	.01			.88					1.46					2.26				T.	.46	.01		7.44
Kenton	do				.01	.12	1.17		.19		T.	.11	.04					.88					1.34				.28	T.	T.		4.14
Memphis	do				T.	.10	1.64		T.	.07	T.		.31						1.33				.20	.92				.25			4.82
Milan ‖	do					T.	2.48		T.				.28					1.09					.60					.23	T.		4.68
Trenton	do						2.05						.55					.60					.40						20		4.05
Union City	do				.25																									
Arkansas.																														
Alicia	White					.20	.75						.90									*	1.90							3.75
Amity	Ouachita																													
Arkadelphia (near)	do					.13	.45		.60		T.		.65					.37					.76				.25				3.21
Arkansas City ‖	Mississippi						.22		.80	.20			.60						1.00				.32					.60			3.74
Batesville ‖	White				.10	.08	1.10		.02	.01			1.00					.18					1.64	.01				.20			4.34
Bee Branch	Arkansas					.30	1.00		.10	T.			.60					.35				.10	1.25				.10				3.80
Benton ‖	Ouachita																													
Bentonville	Arkansas			.03	.05	.77			.01			.66						.16				.41	.01				.06	.14			2.30
Bergman	White				.27	.57	.21						.29					.16					.45					T.			1.95
Black Rock ‖	do				.11	.15	1.24						.41										1.42								3.33
Brinkley ‖	do						1.74		T.	.20			.55						.90				.81	T.				.29			4.49
Calico Rock ‖	do				.40	.20	.60						.85										.30					T.			2.35
Camden ‖	Ouachita						.27		.56	.06			.22						.28				.78	.11				.29			2.57
Centerpoint	Red			T.	T.	.30			.30	T.		.25					.50					1.87	T.			.15				3.37
Clarendon ‖	White				.02		1.30		.20	.15	T.	.02	.46						.58				.73	.02				.25			3.73
Conway	Arkansas			T.	.02	.16	.72		.09	.01	T.	T.	.26					.69					.36	1.02			.07	T.			3.40
Corning	White																													
Dardanelle ‖	Arkansas				.10	.14	.84		.05	.03			.38					.06	.40				1.15				.12				3.27
Dodd City	White				.23		.81						.30										.61				.10	.05			2.10
Dutton	do				T.	.95	.51		.02				.61					.30				.29	.45				T.	T.			3.13
Eldorado ‖	Ouachita						.13		.90	.07	T.					.18			.49				.88	.07				.61			3.33
England ‖	Arkansas					T.	1.30		T.	.25			.45					.48					.68					.51	T.		3.67
Eureka Springs	White				.16	.84	.15						.43					.41					.18					.20			2.37
Fayetteville	do			T.	.24	.80							.22					.40					.15	.52			.08	.10			2.51
Fordyce	Ouachita						.32		.69		.02		.51					.52						.80			.60				3.46
Fort Smith	Arkansas			T.	.11	.76			.06			.12	T.				T.	.06					.77	.15			T.	T.			2.03
Fulton ‖	Red					.40			.42					.26					.20					1.00							2.28
Hardy	White			T.	.33	.40	.64			.01	T.		.48		T.			.06					T.	.57			.18	T.			2.67
Helena ‖	Mississippi						.76		.30	.22				.36					.24					.62	.12			.52			3.14
Hot Springs	Ouachita					.04			.06				.55					.05					*	1.27			.02	T.			1.99
Huttig	do							.15	1.14	.02	.02		.22					.39						.74			.44					3.12
Jonesboro	White				.12	*	2.14		.03		.04		.50					.34					*	1.09			.45		T.		4.71
Junction	Ouachita							T.	.37									.54									.50				1.41
Lake Farm	Arkansas					.80		.50				.24						.51				.62					.20	T.			2.87
Lewisville	Red					T.		.08	.60		.04		.09					.48				T.	1.10				.30				2.69
Little Rock	Arkansas		01			.40	.71		.15		T.	.39	T.					.60				.57	1.06				.11	T.			4.00
Lutherville	do		.03	.38		.72	.57		.04									.99				.16	.85				.13				3.87
Malvern ‖	Ouachita			T.			1.10		.10	T.	.20		.40					.60	.83				1.20	.10				.31			4.84
Mammoth Spring	White				.17	.37	1.02						.74										.51				.28				3.09
Marked Tree ‖	St. Francis					1.95		.10										.22	.40								.12	.31	T.		3.10
Mena	Ouachita		.08	.16			.46		.07			.03	.07					.70				.35	1.64					T.			3.56
Newport ‖	White			.10			1.78					.10	.50						.40				1.14					.40			4.42
Ozark	Arkansas																													
Pine Bluff ‖	do				T.		.75		.34	.20								T.	1.10				.90					.42			3.71
Pocahontas	White				.30	.20	1.00						.55					.43				.11					1.30	.10			3.99
Pond	Arkansas			T.		*	1.05		.03				.44				T.	.27				.15					*	.36			2.30
Portland ‖	Ouachita						.45		.90	.36		T.	.45	T.			T.		.43				T.	.02	T.			.70			3.31
Prescott ‖	do					T.	.70		.37	.02			.37						.57				.95					.20			3.18
Rogers	Arkansas		T.	.31	.98							.12	.05					1.09				.24	.50				T.	.06			3.35
Springbank ‖	Red						.06		.82	.02	T.		.25						.05				.75	.04				.30			2.29
Stuttgart	Arkansas					.96			.36		T.		.60					.64					.63				.18				3.37
Subiaco	do		T.	.31	.60	.13						.30	.45					.25				.93	T.				T.	T.			2.97
Swain	White		T.	.23	.52	.50			.01	.02	T.	.49	.08					.64				.27	.77				.15	.03	T.		3.71
Texarkana ‖	Red					T.	.43			.51	.06		.18					T.	.39				1.00								2.57
Warren ‖	Ouachita						.78			.77	.10		.22						.42				.83					.40			3.52
Whitecliffs ‖	Red				T.	T.			.08	T.	T.		.28					T.	.35				1.83				T.	.50			3.04
Wiggs	Ouachita		T.		T.	.14	.48		.15	T.		T.	.51					.08				.27	1.96				.25	T.			3.84
Wynne ‖	St. Francis				.02		.25		.05	.08		.02	.30						.23				1.05	.05				.50			2.55
Mississippi.																														
Anguilla	Yazoo						.43		2.00				.63					.60					.83				.18		T.		4.67
Austin	do				T.	T.	.91		.53	.04	T.	T.	.40					.52					.79				.41	T.	T.		3.60
Batesville ‖	do						1.05		.50	.45			.50						.68			.30						.50			3.98
Big Creek	do				T.	T.	.40		.30	.36			.20					T.					1.60				*	*	1.17		4.03
Byhalia	do						.70		.50									.80					.80					.55			3.35
Canton	Big Black						.53	.15	1.77	.02			.64					.25	.03				.60				.45	.04			4.48
Charleston	Yazoo					.92			.85				.75					.45					.35				.30				3.62
Clarksdale ‖	do						.26		.46	.22	.01		.50						.45				.38	.17				.58			3.03
Cleveland	do					.95			1.10									.50	T.			.40					.20	T.	T.		3.15
Coffeeville	do						1.04		1.12				.57					.39					.33				.21	.24			3.90
Corinth ‖	Mississippi						1.26		.14	.42			.84						.43				.02	.36				.45		T.	3.92
Crenshaw	Yazoo					.02	.26	.60	.03	T.			.27					.38	.02				.50				.71	.04	T.		2.83
Denmark	do						.49		.90	.05			.42					.40	.06				.34				.11	.20			2.97
Duck Hill	do				T.	T.	.84	T.	.93	T.		.60						*	.44				.74				T.		T.		3.55
Edwards	Big Black					T.	.45	.50	1.75	.05	.10		.30					.20					1.00				.40				4.75
Enid	Yazoo						1.34		1.13									.26	.11				.37				.14	.12			3.47
Fayette	Mississippi					T.	.43	.60	1.92				.61					.37					1.20								5.61
Greenville ‖	Yazoo						.52		.84	.30			.30						.44				.58	.06				.58	T.	T.	3.62
Greenwood ‖	do				T.		.90		.75	.45			.59						.36				.16	.51				.30			4.02
Grenada	do						.60		1.05				.53					.33	T.				.60				.18	.18			3.47
Hernando ‖	do					T.	.53			.21	.03	.04	.43						.47				.58	.25				.65	T.	T.	3.19
Hickory Flat	do				.01	.02	1.10		.67	.04		.05	.47					.45	.05				.38	.05			.15	.18			3.62
Holly Springs ‖	do						1.11		.27	.26	.02	.02	.40						.52				.32	.32				.40		T.	3.64
Kosciusko ‖	Big Black						.15	1.41	.70	T.			.50						.55				.07	.20				.48			4.06
Lake Cormorant	Yazoo					.67			.26				.30					.54					.97				.34	.09			3.17
Lula	do					T.	.28		.72				.53					.33					.73				.50				3.09
Malone	do				T.	.03	1.47		.62	.02		.03	.30					.33	.04				.48	.06			.15	.23	T.		3.76

TABLE 2.—*Daily precipitation for November, 1911. District No. 7*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
***Mississippi*—Con.**																														
Marks	Yazoo																													
Natchez ‖	Mississippi						.36		2.02	.46			.59						.43					.82	.50				.72			5.90
New Albany	Yazoo					T.	.71		.84				.60					.37						.24				.15	.19	T.		3.19
Pontotoc	do					.70	.50		.50	T.	T.		.40					.52						.27				.20	.16			3.25
Port Gibson ‖	Mississippi						.57		1.83	.43			.35						.33					.76	.31				.39			4.97
Rosedale ‖	Yazoo						.25		.72	.35			.12						.33					.45	.04				.75			3.01
Senatobia	do				T.	.08	.28		.70	.05	.03	.02	.16					.33					.57				1.40	.13			3.75
Shoccoe	Big Black						.70	.09	1.57				.28					T.						.74				.42				3.80
Suffolk	Mississippi					T.	.93	1.60	1.07	.04	.02		.58					.16					.09	.05				.83				5.37
Swan Lake	Yazoo																													
Tchula	do						.67	.18	1.50				.72					.34						T.				.27		T.		3.68
University	do			T.			.90		.87				.55					.72						.38				.15	.15			3.72
Utica	Mississippi						.40	.50	1.53	.03			.36										T.	.93				.52				4.27
Vicksburg	do				T.		.28	.63	1.60	.01			.27					.49					.03	1.05				.47				4.83
Water Valley	Yazoo				T.	T.	.50	1.30	1.50		T.	.55						.62						.67								5.14
Woodville	Mississippi						.36	.60	.91				.65					.15						1.80				.80				5.27
Yazoo City ‖	Yazoo						.48		2.10	.56														.93	T.				.34			4.41
Louisiana.																														
Abbeville	Coast					.11		.57	.43				.65					.39						.95				1.02				4.12
Alexandria ‖	Red						T.		2.25	.10			.70						.25					1.22	.17				1.42			6.11
Amite ‖	Coast						.20	T.	.30	T.	T.	.50	1.00				T.		.10										1.05			4.05
Antioch	Red																													
Avoca Island	Coast							.75					.10								.05				.40		2.00					3.30
Baton Rouge ‖	do						.02	.13	.09	.34	.02	.03	.70						.36					.08	.87			.02	.95	T.		3.61
Burnside	do						T.	T.	.65				T.						.15					1.20				1.80				3.80
Burrwood	do						.34		.27				.20					.08						.03				1.50				2.42
Cades	do					T.		.24	.62				.74					.28						.48				1.00				3.36
Calhoun	Ouachita					.03	.04	.32	1.48	.02			.34					.43					T.	1.51				.55				4.72
Cameron	Coast																													
Carrollton	do																													
Cheneyville ‖	Red						.45		2.60				.20						.55					2.30					.90			7.00
Cinclare	Coast					.05		1.25	.30				.95					1.05						.70				1.05				5.35
Clinton ‖	do						.31	T.	.53	.23	T.	.24	.28						.08					T.	.98			T.	.91			3.56
Collinston ‖	Ouachita						.40	.15	1.35									.23						1.10				.60				3.83
Columbia	Red																													
Covington ‖	Coast						.26	.12	T.	.43	T.	T.	.15	.03					.34						1.14				1.60			4.07
Dodson	Red					T.		.49	1.48		T.		.51					.12						1.65				.70	.01			4.96
Donaldsonville ‖	Coast						.03		.05	.20		.05	.60						.15							1.17			3.60			5.85
Dutchtown	do				.50							.60													.70			1.85		T.		3.65
Farmerville ‖	Ouachita								1.25	.14			.22					.48					1.22					.55				3.86
Ferriday	do																													
Franklin ‖	Coast						.08	.22	.45	.52	.01		.10	.04			.01		.13						.74			.02	1.51			3.83
Grand Cane ‖	Red								1.61	.03									.10					1.98				.07	.31			4.10
Grand Coteau	Coast					T.	T.	.18	.27				.22					1.40						1.45				1.02				4.54
Hammond	do						.15	.09	.32				.75					.51						1.12				1.19				4.13
Houma	do						.35	.40	.97				.21											.20				2.20				4.33
Jena	Red							*	3.20									.20						1.40				1.00				5.80
Jennings ‖	Coast						.32		1.17	.05			.15						.10					.05	.26				1.22			3.32
Laark	Red																													
Lafayette ‖	Coast						.10	.10	.58	.35		.05	.73						.13					.06	.65			.10	.81			3.66
Lake Charles ‖	do							.19	1.38																				1.20			2.77
Lakeside	do						.47	.30	1.74		.05		.41						.32				.67					1.19				5.15
La Rose (near)	do						.13	.32	.56				.10											.22				3.20				4.53
Lawrence ‖	do						.16	.57	.05	1.31															.32				3.00			5.41
Leesville	Sabine																													
Liberty Hill ‖	Red							.55	1.25				T.					.30						1.80				.50				4.40
Logansport ‖	Sabine							T.	1.65	T.			.10						.44					1.94					.31			4.44
Melville ‖	Red						.16	T.	.53	.37			.48						.04					.18	1.08			T.	.70			3.54
Merryville	Sabine																													
Minden ‖	Red						T.		1.50	.05			.10						.18					.80					.52			3.15
Monroe ‖	Ouachita						.32		1.80	.15														1.75					.64			4.66
Morgan City ‖	Coast						.12	.02	.42	.27	T.		.05						.03						.50			T.	2.53			3.94
Newellton	Mississippi						.50	.60	1.70				.34											1.35				.40				4.89
New Iberia	Coast					T.		.35	.20			T.	.40					T.						.65				1.05	.10			2.75
New Orleans (1)	do					T.	.27	T.	.55	T.			.09					.03						.62				2.52				4.08
New Orleans (2)	do						.21		.71	.01		.02	.05			.01			.04					.70				2.73				4.48
New Orleans (3)	do						.12	.03	.46		.01							.01						.61				2.47				3.71
New Orleans (4)	do						.18		.65		.01		.03		.01			.03						.65				2.68				4.24
New Orleans (5)	do								.94									.03						.65				2.58				4.20
New Orleans (6)	do						.27		.63			.10						.04						.71				2.52				4.27
New Orleans (7)	do						.33		.62		.02		.04					.01						.48				2.38				3.88
New Orleans (8)	do						.15		.50				.05											.46				2.59				3.75
Opelousas ‖	do						T.	.06	.92	.09		.39	.36						.30					.24	1.59			.07	.84			4.86
Paradis	do							.57															.40								0.97
Pearl River	Pearl						.16	.10	T.	1.30	.02		.16			T.			.14						.16				1.94			3.98
Plain Dealing	Red							.05	.84			.21					.41						1.49				.35				3.35
Rayne ‖	Coast	.10					.10	.20	.55	.30		.05	.34						.10					.20	.40			.10	1.00			3.44
Reserve	do							.11		.52		.16																	2.12			2.91
Robeline ‖	Red								1.92	T.			.15											2.15					.25			4.47
Ruston	Ouachita							1.60																1.80								3.40
St. Francisville	Mississippi									.37															1.35				1.37			3.09
Schriever ‖	Coast						T.		.23	.41			.14												1.24			T.	2.25			4.27
Sheridan	Pearl						.26	T.	.33	T.	T.		.60						.14					.45				1.27				3.05
Shreveport	Red					T.	T.	.62	.51			.10	.01					.13					.29	.60				.40				2.66
Simmesport ‖	do						.43	.02	1.12	.23			.60						.25					.21	1.92					.54		5.32
Southern Univ. Farm	Coast						.32		.64	.03	.02							T.						.57				2.75				4.33
Sugartown	do								2.30									.62					.90	2.19				.80				6.81
Tallulah	Mississippi								2.30				.43																	.30			3.03
Walker	Coast								.45			.80						.53						.90				1.60				4.28
Winnsboro	Red																													

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1911. District No. 7, Lower Mississippi Valley.*

Date.	Colorado.						New Mexico.				Texas.				Kansas.										Oklahoma.			
	Lamar.		Leadville.		Pueblo.		Bell Ranch.		Cimarron.		Amarillo.		Paris.§§		Dodge City.		Ellinwood.		Iola.		Liberal.		Wichita.		Ardmore.§§		Bartlesville.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	40	18	33	14	36	19	53	24	46	26	46	20	65	39	42	21	48	23	41	24	52	19	42	24	61	37	45	33
2....	24	14	35	10	24	17	26	17	26	12	22	16	51	35	23	19	27	18	35	18	21	15	30	21	41	32	35	22
3....	40	10	35	9	54	19	49	25	48	5	36	20	46	35	34	20	33	22	39	30	35	15	37	26	43	33	40	28
4....	56	22	39	12	57	26	60	33	52	21	60	32	54	35	39	32	41	32	46	34	42	29	48	36	55	37	54	38
5....	52	32	33	15	59	28	62	39	53	21	65	44	66	41	49	38	45	39	51	38	65	36	50	42	62	43	65	42
6....	68	32	31	5	64	36	67	29	62	26	68	36	73	45	66	34	68	33	66	44	71	31	66	39	71	46	69	43
7....	66	26	37	10	55	24	53	31	57	23	50	35	61	52	49	30	55	28	54	38	51	29	51	37	60	48	55	41
8....	60	32	30	16	60	32	70	30	56	24	68	34	58	51	54	33	59	33	58	40	59	30	62	37	60	50	58	40
9....	65	35	28	15	61	28	67	35	56	34	70	40	78	51	68	33	66	31	68	45	71	30	64	48	79	52	77	47
10....	75	31	40	22	68	28	72	37	64	37	72	43	84	57	66	33	58	31	77	42	75	31	75	41	83	54	81	48
11....	60	0	32	− 6	58	− 2	60	37	56	23	70	13	83	65	55	8	60	11	79	12	71	10	69	10	86	68	85	20
12....	38	8	30	− 14	23	− 3	43	11	41	7	33	10	40	19	31	5	30	5	25	10	32	5	27	9	38	15	32	12
13....	48	18	42	19	61	14	68	24	62	16	55	26	47	20	51	23	41	20	41	18	64	20	42	20	48	21	45	17
14....	61	27	31	18	61	38	71	41	58	32	69	39	72	22	64	32	64	29	62	35	67	25	64	36	73	38	68	33
15....	66	28	42	13	61	33	72	28	66	21	70	34	81	35	69	30	70	29	70	32	67	29	67	43	79	38	76	34
16....	69	31	30	16	61	32	67	42	57	26	75	38	81	46	71	33	73	39	69	35	76	29	72	37	78	58	74	40
17....	67	26	24	3	53	26	57	27	49	15	51	33	71	41	52	29	62	28	69	31	60	30	50	29	54	44	51	32
18....	67	25	33	10	62	40	68	23	60	24	60	24	73	34	61	26	63	28	60	30	62	25	62	34	69	35	66	35
19....	62	28	39	16	62	33	71	26	67	26	66	30	76	33	65	30	62	28	61	28	66	28	56	35	76	36	68	30
20....	60	30	52	16	60	28	68	28	64	21	66	36	75	39	52	31	58	27	55	31	58	28	55	37	75	40	61	34
21....	67	31	45	18	66	23	68	25	62	19	66	33	69	40	61	30	59	27	58	27	67	27	60	32	71	43	63	29
22....	60	34	28	10	40	30	58	26	49	30	50	35	64	45	52	31	45	39	51	34	61	30	58	33	68	54	56	42
23....	46	24	30	0	43	22	49	25	40	11	45	27	50	42	40	20	50	19	35	22	44	20	35	22	46	39	42	26
24....	55	19	29	8	56	21	65	21	56	11	60	23	49	25	58	20	56	13	40	15	67	18	45	18	52	22	41	18
25....	60	21	38	5	54	16	59	20	55	17	58	30	59	24	60	23	62	22	55	23	60	22	55	28	63	28	60	23
26....	51	24	27	14	59	24	66	11	57	24	68	29	66	25	61	23	61	26	62	34	66	22	66	32	69	33	66	30
27....	26	22	15	− 4	27	16	52	24	39	16	37	16	60	32	32	19	53	25	47	25	50	20	45	24	51	45	34	33
28....	23	10	2	− 12	27	9	32	14	24	2	21	8	38	27	21	7	30	14	26	13	22	5	24	15	32	25	25	20
29....	44	8	31	− 11	48	5	50	6	51	3	40	5	37	18	40	1	42	4	25	7	41	2	34	9	36	15	32	11
30....	51	15	36	8	53	13	57	13	52	19	52	20	56	15	55	20	57	20	42	18	51	18	51	20	62	16	52	17
Mns..	54.2	22.7	32.2	8.5	52.4	22.5	59.3	25.7	52.8	19.7	55.6	27.6	62.8	36.3	51.4	24.5	53.3	24.8	52.2	27.8	56.5	22.6	52.1	29.1	61.4	38.2	55.9	30.6

Date.	Oklahoma.														Missouri.								Lynnville, Ky.		Jackson, Tenn.	
	Enid.§§		McAlester.		Mangum.		Muskogee.		Oklahoma.		Weatherford.§§		Woodward.		Caruthersville.		Ironton.§§		Lamar.§§		Olden.		Springfield.					
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	48	34	60	34	49	38	57	31	44	31	41	35	48	27	62	28	51	28	47	29	54	32	45	25	.....	.....	61	40
2....	31	24	54	29	54	25	47	25	31	25	28	24	28	20	47	27	38	17	39	20	47	29	36	19	.....	.....	54	37
3....	41	25	43	33	49	49	45	30	40	27	38	24	36	21	47	30	43	20	39	22	43	26	39	30	.....	.....	52	29
4....	45	29	55	37	54	28	52	35	50	38	50	26	44	35	47	30	47	35	46	34	42	32	40	36	.....	.....	53	40
5....	49	35	62	45	61	39	53	43	60	44	58	36	52	37	54	45	53	35	51	37	44	37	49	36	.....	.....	58	42
6....	71	39	74	50	73	38	72	50	68	44	68	38	74	38	75	49	65	43	66	43	66	43	63	49	.....	.....	76	54
7....	71	37	64	47	59	39	61	41	53	42	54	39	53	34	64	42	59	40	56	37	60	40	52	40	.....	.....	62	43
8....	69	37	77	48	72	38	57	46	64	43	67	35	68	32	60	47	60	37	60	39	.....	.....	57	43	.....	.....	56	47
9....	71	35	78	52	85	39	75	53	76	52	78	38	75	30	63	47	60	38	72	45	58	42	69	49	.....	.....	61	49
10....	83	58	84	60	86	42	83	55	80	52	81	44	82	36	67	57	70	56	80	45	78	48	78	54	.....	.....	70	56
11....	78	49	83	35	86	43	84	28	83	17	81	48	70	17	80	65	76	58	83	58	75	64	80	13	.....	.....	80	65
12....	35	13	38	11	60	15	52	15	32	14	36	13	34	10	76	21	26	10	26	11	75	10	21	9	.....	.....	78	26
13....	41	14	48	19	55	26	45	17	45	23	49	15	51	22	41	19	33	10	40	11	33	12	33	16	.....	.....	37	20
14....	57	28	68	37	86	28	68	32	68	39	76	30	69	45	53	28	50	27	62	21	55	26	56	30	.....	.....	54	29
15....	77	37	80	38	86	35	67	47	74	41	72	31	74	28	74	30	70	25	72	33	69	34	65	38	.....	.....	69	32
16....	76	38	69	53	84	45	68	56	74	55	74	38	79	43	75	37	62	27	73	34	66	32	66	43	.....	.....	71	33
17....	56	34	73	40	66	35	71	40	72	36	75	30	68	32	66	46	61	54	40	35	64	36	68	33	.....	.....	72	57
18....	75	33	71	37	84	28	65	31	66	36	79	32	67	28	61	30	53	28	58	31	55	29	52	34	.....	.....	59	32
19....	76	35	76	36	87	28	73	46	72	38	74	38	69	26	63	37	56	29	62	37	61	32	62	33	.....	.....	63	33
20....	60	34	74	42	80	37	66	35	62	37	65	34	60	29	65	35	53	32	55	34	59	37	53	39	.....	.....	61	35
21....	74	34	69	39	73	33	61	35	68	38	72	32	66	23	60	29	54	20	58	33	55	30	54	34	.....	.....	56	29
22....	66	34	62	50	82	33	55	47	70	42	75	32	60	45	56	36	56	30	48	34	52	35	50	40	.....	.....	54	30
23....	46	28	57	35	57	32	52	31	43	26	76	22	50	26	50	36	35	34	33	27	49	31	45	22	.....	.....	55	37
24....	54	16	48	22	59	20	45	19	49	21	55	13	58	13	43	25	38	22	41	18	41	18	36	18	.....	.....	42	20
25....	70	16	60	26	78	20	59	25	60	27	67	20	62	21	57	22	56	17	57	19	55	24	49	28	.....	.....	52	22
26....	70	32	65	35	75	26	62	31	66	35	63	23	71	36	65	29	64	26	64	25	62	31	62	35	.....	.....	64	29
27....	39	29	60	33	42	35	58	29	47	26	38	35	61	26	54	39	49	32	46	34	60	34	46	26	.....	.....	60	41
28....	26	20	34	25	37	20	32	22	26	17	27	19	29	11	49	28	26	23	20	18	40	19	26	12	.....	.....	50	30
29....	34	9	36	16	58	10	32	15	31	11	38	9	39	3	36	22	29	12	28	10	27	10	22	11	.....	.....	31	21
30....	51	9	56	19	77	10	55	15	57	23	67	10	56	18	49	15	48	14	40	10	50	15	42	17	.....	.....	43	17
Mns..	58.0	29.8	62.6	36.1	68.5	31.1	59.1	34.0	57.7	33.3	60.1	28.8	58.4	27.1	58.6	34.4	51.4	29.3	52.0	29.5	55.0*	30.9*	50.5	30.4	.....	.....	58.5	35.8

TABLE 3.—*Maximum and minimum temperatures at selected stations, November, 1911. District No. 7*—Continued.

Date.	Tennessee.				Arkansas.																		Mississippi.					
	Kenton.		Memphis.		Bentonville.		Corning.		Dardanelle. §§		El Dorado. §§		Fort Smith.		Little Rock.		Pine Bluff. §§		Texarkana. §§		Wynne. §§		Clarksdale. §§		Corinth. §§		Greenville. §§	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	59	34	57	41	50	29	.....	.....	62	34	62	36	58	38	58	40	54	38	62	39	55	34	62	35	68	44	64	43
2....	48	24	43	28	39	21	.....	.....	46	29	50	36	45	30	43	31	54	32	48	36	49	29	48	31	69	29	50	35
3....	48	23	44	32	39	29	.....	.....	44	30	49	32	41	31	45	31	47	31	51	34	46	22	49	30	60	30	47	33
4....	47	37	49	39	44	34	.....	.....	47	35	60	33	48	37	50	38	60	38	59	36	49	34	60	33	52	31	65	34
5....	55	44	61	44	56	40	.....	.....	59	37	66	41	52	42	58	43	68	40	69	42	65	33	68	40	66	40	73	43
6....	75	50	73	59	68	45	.....	.....	73	45	79	49	70	51	72	55	68	55	67	48	65	45	80	49	78	45	81	54
7....	64	45	62	51	55	42	.....	.....	69	43	61	52	61	49	62	50	60	50	62	45	60	46	61	48	63	46	60	54
8....	54	46	56	48	62	44	.....	.....	58	45	56	50	59	48	56	48	60	49	57	50	63	47	55	49	52	46	56	51
9....	60	47	65	51	70	51	.....	.....	70	48	75	51	73	53	65	51	70	52	77	52	71	48	65	49	58	46	63	51
10....	67	56	71	56	77	57	.....	.....	81	51	78	56	80	55	76	57	74	57	79	52	73	52	73	53	72	52	74	55
11....	80	61	79	44	80	15	.....	.....	82	55	82	65	85	22	81	32	78	68	81	63	71	61	81	60	76	57	82	61
12....	78	23	45	23	26	10	.....	.....	37	20	41	24	33	16	36	22	40	24	78	24	23	22	40	27	36	30	43	31
13....	35	15	35	20	37	11	.....	.....	40	19	44	21	42	20	37	23	42	23	69	36	34	17	39	19	38	20	44	23
14....	52	27	52	32	60	32	.....	.....	66	19	64	24	63	31	58	31	59	28	72	41	50	18	55	22	56	21	59	26
15....	69	35	72	42	71	36	.....	.....	76	31	76	38	75	38	75	42	78	35	77	45	65	32	73	35	71	33	75	37
16....	71	34	73	44	70	45	.....	.....	75	31	79	43	72	48	75	45	78	37	79	49	70	34	77	37	72	36	79	40
17....	67	52	70	40	68	31	.....	.....	66	34	72	51	72	39	68	40	69	37	72	59	61	42	74	38	72	38	78	47
18....	60	31	60	38	58	31	.....	.....	64	28	79	34	62	32	66	34	67	34	69	36	56	32	66	32	60	32	68	34
19....	58	34	64	46	69	35	.....	.....	73	33	74	36	71	37	70	45	74	36	75	38	61	34	71	37	64	33	74	38
20....	52	36	63	47	60	34	.....	.....	70	35	76	39	69	40	67	48	75	43	73	45	60	35	74	41	68	40	75	42
21....	54	26	55	38	61	34	.....	.....	57	32	64	40	58	40	57	41	64	40	64	44	50	32	60	38	53	33	63	43
22....	57	33	59	42	56	45	.....	.....	56	33	76	41	52	44	57	42	64	40	63	46	69	38	63	38	60	33	70	42
23....	54	36	56	33	47	24	.....	.....	48	44	59	44	50	32	50	33	48	48	54	51	48	42	54	40	48	36	60	45
24....	36	25	39	27	42	18	.....	.....	47	26	47	27	44	25	44	28	44	27	48	26	40	23	44	26	38	27	47	29
25....	51	20	50	30	54	24	.....	.....	57	21	57	23	58	25	58	28	59	22	57	25	48	22	55	21	52	21	56	23
26....	61	32	61	38	61	37	.....	.....	65	21	62	24	64	31	62	33	64	33	68	29	59	25	65	21	64	22	64	27
27....	56	40	57	45	53	26	.....	.....	52	35	65	26	58	31	51	35	53	40	58	34	45	33	55	35	56	32	53	41
28....	49	28	45	24	26	13	.....	.....	35	32	40	31	31	21	35	25	36	34	38	30	34	33	37	35	38	37	43	35
29....	30	21	25	21	26	10	.....	.....	34	20	34	19	31	18	32	20	35	19	36	21	28	18	37	23	25	21	35	23
20....	43	16	43	22	47	15	.....	.....	49	15	.....	18	52	16	48	18	52	18	50	21	.....	17	47	17	44	16	48	21
Mns..	56.3	34.4	56.1	38.2	54.4	30.6	.....	.....	58.6	32.7	63.0[a]	36.8	57.6	34.7	57.1	37.0	58.0	37.6	63.7	39.9	54.1[a]	33.2	59.6	35.3	57.6	34.2	61.6	38.7

Date.	Mississippi.						Louisiana.																			
	Kosciusko. §§		Natchez. §§		Vicksburg.		Alexandria. §§		Baton Rouge. §§		Covington. §§		Lafayette. §§		Lake Charles. §§		Monroe. §§		New Orleans.		Robeline. §§		Schriever. §§		Shreveport.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	61	40	67	41	63	41	70	44	72	46	78	53	73	49	71	47	69	40	71	58	67	40	82	54	64	42
2.....	48	35	57	41	49	39	57	42	61	44	67	48	60	45	60	43	54	39	63	48	51	35	78	45	50	40
3.....	50	33	47	37	49	35	51	38	54	39	57	43	52	41	51	38	48	34	54	45	50	36	72	43	48	35
4.....	67	34	70	36	67	43	68	36	74	38	71	43	72	37	70	37	60	35	67	50	69	36	78	44	61	42
5.....	77	43	75	36	75	51	68	37	78	52	78	46	79	39	72	40	70	41	71	56	77	39	86	46	74	49
6.....	83	47	83	55	81	66	80	55	83	60	81	55	86	58	85	43	73	55	80	70	83	50	88	63	80	60
7.....	65	50	63	61	66	53	65	60	71	63	72	66	74	67	70	60	60	56	73	64	61	55	78	65	63	53
8.....	55	50	58	54	57	52	60	54	61	56	68	59	65	58	66	52	57	52	80	59	63	54	78	64	58	52
9.....	61	50	78	52	63	53	77	53	79	55	62	56	79	57	80	53	67	52	64	57	80	54	82	58	78	55
10.....	75	53	80	56	78	57	79	56	85	62	81	54	86	58	85	59	82	50	85	62	86	61	89	58	82	64
11.....	84	58	89	56	83	71	86	64	85	65	84	62	85	68	85	58	82	64	83	70	83	63	88	66	83	42
12.....	43	34	55	39	75	31	48	40	51	41	59	49	52	45	57	40	50	32	75	39	61	33	63	48	42	28
13.....	44	22	48	25	46	26	48	27	52	27	59	29	52	27	81	26	50	22	48	33	49	20	57	30	45	25
14.....	64	26	64	30	62	33	65	27	71	33	68	29	67	29	80	26	56	24	63	42	63	21	58	31	69	36
15.....	75	50	76	32	75	58	73	39	79	55	79	34	85	38	83	27	82	38	74	53	79	35	65	32	73	53
16.....	71	35	80	50	77	52	78	52	81	51	78	44	85	56	84	28	81	45	76	54	83	51	87	37	76	56
17.....	77	40	83	52	79	45	80	52	84	60	82	44	79	58	85	29	82	50	83	59	81	62	81	47	80	46
18.....	65	34	67	40	65	40	68	39	74	45	70	45	71	46	76	30	71	36	63	50	71	32	73	46	69	39
19.....	72	34	73	36	71	48	73	35	78	39	77	35	79	35	77	32	75	21	72	50	66	31	82	35	74	44
20.....	75	36	74	35	72	47	73	35	79	41	77	35	76	39	85	33	78	38	71	54	72	31	83	44	74	47
21.....	62	40	69	38	65	48	70	36	73	42	73	37	75	42	70	60	74	40	68	53	73	32	78	41	68	48
22.....	64	37	75	46	68	44	72	37	75	44	72	41	73	41	66	52	73	41	70	49	72	40	77	43	68	50
23.....	58	30	68	50	63	41	68	42	76	61	77	42	77	51	78	53	70	50	77	59	71	50	83	50	62	48
24.....	47	28	48	34	45	32	50	33	52	37	56	39	51	36	79	28	54	30	63	42	51	32	73	43	48	31
25.....	56	22	55	26	53	30	56	27	53	31	53	28	52	28	56	29	60	26	49	36	54	21	60	31	58	26
26.....	65	22	62	28	64	34	60	27	67	34	67	28	72	30	66	29	66	28	62	45	63	22	75	32	63	34
27.....	53	29	40	40	55	45	60	28	60	53	60	33	67	35	60	36	55	40	66	53	57	35	72	38	58	37
28.....	42	35	34	34	45	31	42	34	44	37	44	40	42	37	42	33	48	33	56	40	43	30	57	36	40	27
29.....	34	21	38	24	35	23	40	24	46	27	44	28	45	25	40	22	40	22	40	31	40	22	45	28	37	22
30.....	48	16	23	19	47	24	50	20	55	24[a]	25	21	52	22	43	20	53	21	47	31	55	15	55	24	51	24
Mns.....	61.4	36.4	63.3	40.1	63.1	43.1	64.5	39.8	68.4	45.4	67.3	42.2	68.8	43.2	70.1	38.8	64.7	38.5	67.4	50.4	65.8	37.9	74.4	44.1	63.2	41.5

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1911.

DISTRICT No. 8, TEXAS AND RIO GRANDE VALLEY.

B. BUNNEMEYER, District Editor.

GENERAL SUMMARY.

November was marked by unusually cold, dry, and windy weather, with frequent and great changes in temperature and about the normal amount of sunshine. A pronounced feature of the month was the exceptionally severe weather that prevailed during the last 4 days, when temperatures well below freezing occurred throughout the district, and below zero in Colorado and the northern half of New Mexico, breaking all November records of cold weather in many sections. Cattle on the ranges suffered considerably and much damage resulted in the sugar and trucking regions of Texas, while all unprotected tender vegetation was killed. The precipitation exceeded the normal over a limited area in Colorado and northern New Mexico, in southwest Texas covering portions of the Rio Grande, Nueces, and San Antonio watersheds, and on the upper Texas coast covering Matagorda, Brazoria, and Galveston Counties. Elsewhere it was decidedly deficient, and rain was needed in many sections of the district at the close of the month. The number of days with 0.01 inch or more of precipitation averaged 5 in Colorado, 3 in New Mexico, and 4 in Texas.

The greatest monthly precipitation in Colorado was 2.48 inches at Cumbres, and the least, 0.13 inch at Manassa. The greatest in New Mexico was 4.01 inches at Anchor Mine, and in Texas, 5.79 inches at Matagorda, while there was practically no precipitation at 15 stations in the former and at 2 stations in the latter State. Excessive precipitation of 2.50 inches in 24 consecutive hours occurred at 9 stations in Texas, the greatest being 4 inches at Columbia on the 6th.

Most of the precipitation in Colorado and New Mexico was in the form of snow, and the fall averaged above the normal. The greatest monthly amount in Colorado was 25.8 inches at La Veta Pass, and in New Mexico, 67 inches at Anchor Mine. In portions of the latter State the snow is hard packed on the north sides of the higher mountains and in the gulches where the depth varies from 3 to 5 feet. There was very little snow in Texas.

TEMPERATURE.

The monthly mean temperature was 3.6° below the normal in Colorado and Texas, and 2.9° below in New Mexico. A severe cold wave overspread the entire district from the 27th to 30th, while in portions of the district cold waves occurred also from the 11th to 13th and 23d to 25th. The cold wave of the 11th caused a remarkably sudden and great fall of temperature in Texas as it followed the warmest day of the month, but that of the 27th gave by far the coldest weather. The diurnal range of temperature varied from about 13° on the coast to about 37° in the extreme northwestern portion of the district.

The highest and lowest temperatures reported were: In Colorado, 67° at Garnett on the 10th and −21° at Hermit on the 12th; in New Mexico, 83° at Carlsbad on the 10th and −20° at Virsylvia on the 27th and at Red River Canyon on the 28th; and in Texas, 96° at Falfurrias on the 17th and 3° at Colorado and Valentine on the 29th. The local monthly means ranged from 23° to 30.9° in Colorado, from 25.9° to 49.9° in New Mexico, and from 43.6° to 64.7° in Texas.

PRECIPITATION.

The average for the Rio Grande watershed was 0.81 inch, which is about 60 per cent less than the amount received during the preceding month. At 14 stations in New Mexico there was practically no precipitation, while the greatest amount, 4.85 inches, occurred at Fort McIntosh, Tex. A considerable excess occurred from Del Rio, Tex., southward to within about 100 miles from the Gulf, and there was a slight excess over the upper portion, but over the long stretch from Santa Fe, N. Mex., to Del Rio, Tex., the deficiency was pronounced.

The precipitation over the Rio Pecos watershed was below the normal over the entire stretch except the extreme upper portion where a moderate excess occurred. The average was 0.47 inch or about 30 per cent of the amount received during October. There was no precipitation at Liston, N. Mex., and the greatest amount was 2.42 inches at Winsors, N. Mex. In the upper portions of both the Rio Pecos and Rio Grande watersheds nearly all the precipitation was in the form of snow.

In the Nueces and San Antonio watersheds the precipitation was slightly greater than normal, but there was a general deficiency in the other Texas watersheds which varied from 0.43 inch for the Guadalupe to 1.62 inches for the Sabine. The following are the average monthly amounts in inches for the various watersheds: Nueces, 2.36; San Antonio, 2.44; Guadalupe, 2.27; Lavaca, 2.60; Colorado, 0.99; Brazos, 1.16; Trinity, 1.53; Neches, 3.00; Sabine, 1.96; and coastal plains, 2.14. The greatest monthly amount was 5.79 inches at Matagorda in the coastal plains, while there was practically no precipitation at Seymour in the Brazos watershed and none at Winters in that of the Colorado.

RIVER CONDITIONS.

No rises of consequence occurred in any of the streams of the district, and they were practically at low-water mark during the month.

TABLE 1.—*Climatological data for November, 1911. District No. 8, Texas and Rio Grande Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Colorado.																			
Blanca	Costilla	7,865	2								2.48		0.48	17.5	8	15	6	9	sw.	Dr. L. C. Audrain.
Cumbres	Conejos	10,015	4																	Mrs. Ida M. Lively.
Garnett	Costilla	7,576	18	26.5	− 3.8	67	10	− 15	29	50	0.37	− 0.02	0.30	5.5	2	5	20	5	nw.	Chas. Speiser.
Hermit	Hindsdale	9,843	4					− 21	12†		1.35		0.40	15.0	6	17	3	10		Marion Mason.
La Veta Pass	Costilla	9,000	1								1.67		1.11	25.8	3	17	11	2	w.	Clara M. Wright.
Manassa	Conejos	7,700	5	29.1		60	20	− 17	28	50	0.13		0.10	2.0	2	14a	8a	7a	sw	J. B. Chapman.
Platoro	do	7,675	4								1.55		0.38	21.2	9	17	7	6	w.	Walter R. Hook.
Saguache	Saguache	7,740	19	30.9	− 2.5	60	21	− 5	29	42	0.29	− 0.01	0.29	3.5	1	17	5	8	w.	Eugene Williams.
San Luis	Costilla	7,794	20	29.6	− 4.4	63	20	− 15	28	51	0.72	+ 0.31	0.36	5.0	6	18	9	3	sw.	P. B. Albright.
Wagon Wheel Gap Experiment Station.	Mineral	9,235	....	23.0	− 3.7	46	19	− 11	12	43	1.13	+ 0.11	0.36	12.7	9	17	10	3	nw.	U. S. Weather Bureau.
New Mexico.																				
Agricultural College	Donna Ana	3,863	49	45.8	− 3.7	74	10	7	29	46	0.00	− 0.58	0.00	0	0	15	15	0	sw.	N. Mex. Agricultural College.
Alamogordo (near)	Otero	4,338	10	47.8	− 2.7	80	17	8	28†	50	0.18	− 0.54	0.10	1.5	2	7	17	6	sw.	Charles Sutton.
Alamogordo	do	4,320	2								0.14		0.08	0.5	2					Agent E. P. & S. W. R. R.
Almos Ranch	Sandoval	7,800	1								1.00		0.54	12.0	5	20	2	8	sw.	H. H. Brooks.
Albuquerque	Bernalillo	5,000	35								0.34	− 0.17	0.34	T.	1	20	8	2	w.	Pitt Ross, C. E.
Ancho	Lincoln	6,112	2								T.		T.	0.2	0					Agent E. P. & S. W. R. R.
Anchor Mine	Taos	10,600									4.01		0.60	67.0	11	15	0	15	ne.	C. H. Brigham.
Artesia	Eddy	3,350	4	47.8		80	14	8	29	54	0.47		0.20	0	5	14	6	10	n.	Will Benson, C. E.
Aspen Grove Ranch	Rio Arriba	9,000	2								1.78		0.43	19.6	8	13	15	2		J. D. Maupin.
Batemans Ranch	do	8,900	2								2.12		0.75	22.0	8	17	6	7	w.	John W. Bateman.
Berino	Donna Ana	3,788									0.09		0.09	0	1	22	4	4	ne.	C. A. Thompson.
Bluewater	Valencia	6,732	10	35.2		63	14	− 3	30	47	0.39	− 0.03	0.24	2.0	2	18	9	3	n.	Bluewater Developement Co.
Boaz	Chaves	4,154	2	42.4		75	16	2	29	48	0.18		0.10	T.	2	18	6	6	sw.	D. C. Savage.
Capitan	Lincoln	6,348	2								0.50		0.30	2.5	3	23	2	5	n.	Agent E. P. & S. W. R. R.
Carlsbad	Eddy	3,120	16	49.9	− 2.5	83	10	11	29	51	0.20	− 0.50	0.15	0	2	20	6	4	n.	U. S. Reclamation Service.
Carrizozo	Lincoln	5,429	3	42.4		65	10†	8	29	40	0.02		0.02	0	1	24	5	1	e.	Agent E. P. & S. W. R. R.
Chama	Rio Arriba	7,851	12	30.2	− 7.0	58	20	− 3	12†	40	1.65	+ 0.35	0.70	11.5	6	20	10	0	sw.	Frank C. Johnson.
Cloudcroft	Otero	8,650	8	35.0		57	20	0	28	32	0.33	− 1.33	0.13	1.2	3	13	14	3		Agent E. P. & S. W. R. R.
Corona	Lincoln	6,666	2								0.39		0.20	2.0	3	20	0	10	w.	Do.
Coyote	do	5,800	2								0.04		0.03		2	19	5	6	sw.	Do.
Cundiyo	Santa Fe	6,889	2								1.08		0.48	7.1	5	22	4	4	w.	Juan Vijil.
Demonstration Farm	San Miguel	6,800	2								0.09		0.05	1.0	2					Erb & Westerman.
Duran	Torrance	6,272	2								0.72		0.37	9.5	4	27	1	2		Agent E. P. & S. W. R. R.
Escondido	Otero	4,014	2								0.15		0.12	3.0	2	24	4	2		Do.
Espanola	Rio Arriba	5,590	13	35.2	− 4.1	60	10†	− 3	29	39	1.35	+ 0.55	0.72	13.2	8	18	8	4	n.	Mrs. E. F. McBride.
Estancia	Torrance	6,140	6	32.7		65	8	− 5	28	47	0.14		0.14	2.0	1	15	10	5	e.	Agent N. M. Central R. R.
Fort Stanton	Lincoln	6,231	33	40.0	− 1.8	70	10	− 3	28	48	0.16	− 0.67	0.05	1.5	4	21	3	6	w.	U. S. Sanitarium.
Fort Sumner	Gaudalupe	3,960	3																	F. A. Manzanares.
Gallinas	Lincoln	6,635	2								0.21		0.11	2.0	2	21	5	4	w.	Agent E. P. & S. W. R. R.
Gallinas Planting Station.	San Miguel	7,500	4	36.0		68	15†	− 10	28	52	0.82		0.30	10.5	6	20	6	4	sw.	U. S. Forest Service.
Glorieta Ranch	Socorro	5,700	1								0.00		0.00	0	0	24	2	4	sw.	Charles M. Crossman.
Harveys Upper Ranch	San Miguel	9,400	2								1.20		0.43	22.5	5	20	7	3	se.	Simon B. Warner.
Hillsboro	Sierra	5,224	13	48.2	+ 1.3	79	1†	16	25	48	0.00	− 0.66	0.00	0	0	21	7	2	sw.	Dr. Frank I. Givens.
Hondo Reservoir	Chaves	3,904	2	45.9		80	10	7	29	54	0.24		0.22	1.0	3	22	3	5	w.	U. S. Reclamation Service.
Hope	Eddy	4,000	3																	A. W. Board.
Jemez Springs	Sandoval	6,100	2	35.4		58	19†	0	29	33	2.02		0.80	13.2	11	15	10	5	sw.	Linus L. Shields.
Knowles (near)	Eddy	4,300	2	45.2		78	10	6	29	49	0.17		0.15	0.2	2	21	5	4	sw.	J. W. Mosley.
Laguna	Valencia	5,840	6	40.7		69	4†	7	29	44	0.16		0.16	2.0	1					Guss Weiss.
Lagunita	Guadalupe	4,500	6																	P. A. Turnbull.
Lake Valley	Sierra	5,412	6								T.		T.	T.	0	21	9	0	sw.	Wm. P. Keil.
Lakewood	Eddy	3,170																		Miss Josephine Knapp.
Las Vegas	San Miguel	6,385	24	36.2	− 4.2	70	16	− 1	28	48	0.30	− 0.49	0.20	3.2	5	22	6	2	w.	N. Mex. Normal University.
Liston	Chaves	5,000	1								0.00		0.00	0	0	20	5	5	w.	H. G. Liston.
Los Lunas (near)	Valencia	4,900	21	39.6	− 2.6	71	10	5	29	47	0.03	− 0.43	0.03	0	1	13	16	1		Richard Pohl.
Magdalena	Socorro	6,557	6	38.8		61	19	4	29	40	T.		T.	T.	0	16	12	2	w.	William Pender.
Mescalro	Otero	6,627	....	38.8		62	20	− 2	29	39	0.03		0.03	0.2	1	18	8	4	sw.	Rev. R. H. Harper.
Mineral Hill	San Miguel	7,050	6								0.65		0.30	4.0	3	14	15	1	w.	W. M. Nelson.
Monterey	Otero	4,436	2								T.		T.	T.	0	20	6	4		Agent E. P. & S. W. R. R.
Mountainair	Torrance	6,547	10	34.6	− 5.5	60	9	2	29	44	T.	− 1.18	T.	T.	0	17	4	9	sw.	Miss Julia Hill.
Newman	Otero	3,989	2			79	13				0.10		0.10	0	1	20	7	3	n.	Agent E. P. & S. W. R. R.
Noria	Dona Ana	4,114	2			74	7	4	29	....	0.20		0.20	0	1	24	0	6	w.	Do.
Orange	Otero	5,000	4																	J. Brownfield, jr.
Orogrande	do	4,171	2								0.07		0.07	0	1	22	3	5	w.	Agent E. P. & S. W. R. R.
Oscura	Lincoln	5,016	2								0.11		0.07	1.0	3	21	1	8	sw.	E. F. Jones.
Otis	Eddy	3,100	2								0.38		0.26	T.	3	18	4	8	sw.	A. M. Hove.
Otto	Santa Fe	6,200	2								1.02		0.91	1.2	4					O. H. Johnson.
Pastura	Guadalupe	5,285	2			80	15	− 2	29	....	0.46		0.25	6.0	4	13	15	2	se.	Agent E. P. & S. W. R. R.
Placitas (near)	Bernalillo	8,000	1	33.4		59	20	− 3	29	39	0.75		0.40	10.5	3	18	8	4	w.	George C. Ellis.
Plainview	Chaves	4,300																		L. P. Adair.
Red River Canyon	Taos	8,956	3	25.9		60	1	− 20	28	54	1.62		0.42	24.0	7	19	10	1	e.	Mrs. L. R. Penn.
Rincon	Dona Ana	4,030	13	48.0	0.0	76	10	5	29†	53	T.	− 0.47	T.	T.	0	18	9	3	w.	C. H. Raitt.
Rio Grande Dam	Sierra	4,265	13	47.2	+ 1.2	75	9†	13	29	44	T.	− 0.30	T.	T.	0	21	8	1	se.	U. S. Reclamation Service.
Rio Grande Industrial School.	Bernalillo	5,000	....	39.4		70	10	7	29	42	0.54		0.52	0.5	2	19	5	6	n.	Rev. A. C. Heyman.
Rosedale	Socorro	6,910	6	39.2		60	9†	0	28	33	T.		T.	T.	0	21	8	1	w.	Mrs. J. J. MacInness.
Roswell	Chaves	3,578	13	43.6	− 4.5	79	10	10	29	53	0.46	− 0.70	0.35	0.2	5	16	10	4	n.	U. S. Weather Bureau.
San Marcial	Socorro	4,439	14	44.9	− 4.7	72	16	9	29	42	0.00	− 0.53	0.00	0	0	21	8	1	se.	Agent A. T. & S. F. R. R.
San Rafael	Valencia	6,509	7	37.4		62	15	3	29	42	0.04		0.04	0.5	1	15	6	9	nw.	Dr. Charles M. Grover.
Santa Fe	Santa Fe	7,013	38	32.3	− 5.9	59	20	− 8	28	35	1.34	+ 0.56	0.40	12.8	9	18	9	3	ne.	Section Center.
Santa Fe Canyon	do	8,000	1								2.01		0.53	19.5	6	19	4	7	ne.	C. Martinez.
Santa Rosa	Guadalupe	4,624	11	43.3		75	19	6	29	45	0.41	0.00	0.28	4.0	2	23	7	0	w.	John L. Chapman.
Socorro	Socorro	4,600	19	45.2	− 0.4	76	8†	6	28	43	0.08	− 0.48	0.08	0	1	29	0	1	n.	J. J. Leeson.
South Fork	Taos	8,405																		Frank Hamm, jr.
Stanley	Santa Fe	6,317	2																	George R. Camp.
Strauss	Dona Ana	4,080	12								0.29	− 0.31	0.29	0	1	22	4	4	e.	Agent So. Pac. R. R.
Taft	Guadalupe	5,000	1								0.40		0.20	5.0	2	19	7	4	w.	J. F. Nappier.
Tajique	Torrance	6,900	1								0.79		0.30	4.0	5	13	7	10		U. S. Forest Service.
Taos	Taos	6,983	13	38.2	− 0.2	64	14†	− 5	28†	47	0.81	+ 0.14	0.45	10.5	6	18	9	3	w.	Alexander Gusdorf.
Taos Canyon	do	8,959	2								1.73		0.55	18.1	8					L. Martinez, jr.
Tecolote	Lincoln	6,539	2								0.16		0.08	2.0	3	16	4	10		Agent E. P. & S. W. R. R.
Three Rivers	Otero	4,559	2								T.		T.	T.	0	17	5	8		Do.

TABLE 1.—*Climatological data for November, 1911. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New Mexico—Contd.																				
Tijeras Canyon	Bernalillo	6,214	1								0.93		0.87	2.0	2	16	7	7	sw.	U. S. Forest Service.
Torrance	Torrance	6,432	2								0.42		0.30	5.5	3	14	9	7	sw.	Agent E. P. & S. W. R. R.
Tres Piedras	Taos	8,076	6	28.6		57	20	− 10	29	42	0.74		0.24	5.2	7	22	2	6	w.	U. S. Forest Service.
Truchas	Rio Arriba	7,935	2	31.0		56	15	7	12	36	2.47		0.90	32.4	7	11	13	6	w.	Miss Ruth Rendon.
Tularosa	Otero	4,436	3	46.8		71	20	12	29	35	0.00		0.00	0	0	17	11	2	sw.	I. L. Fairless.
Vaughn	Guadalupe	5,952	2								0.53		0.21	7.0	3	21	4	5		Agent E. P. & S. W. R. R.
Virsylvia	Taos	7,500	1	28.9		64	23	− 20	27	62	0.54		0.20	6.8	4	23	5	2	s.	Dr. I. N. Woodman.
Winsors	San Miguel	8,200	13	28.4	− 5.4	55	20	− 11	28	50	2.42	+ 1.16	1.23	25.0	10	14	7	9	w.	Henry D. Winsor.
Texas.																				
Abilene	Taylor	1,738	26	50.2	− 2.4	87	11	14	29	59	0.31	− 0.93	0.20	0	3	14	10	6	s.	U. S. Weather Bureau.
Albany	Shackelford	1,429	17	49.0	− 3.7	85	10†	7	29	53	0.17	− 1.41	0.17	0	1	18	5	7		N. L. Bartholomew.
Alice	Jim Wells	209		59.1		92	11	22	30	38	1.56		1.00	0	4	7	5	18	n.	R. M. Boerum.
Alpine	Brewster	4,482									0.15		0.15	0	1	21	2	7	ne.	J. Frank Dobie.
Alvin	Brazoria	49	13	56.6		84	6	20	30	39	2.28	− 1.86	1.41	0	4	11	8	11	n.	Alvin Japanese Nursery.
Anahuac	Chambers	23	2								2.39		1.24	0	4					B. H. Collins.
Antelope	Jack										0.56		0.29	0	3	15	11	4		Chas. C. Hawkins.
Aspermont	Stonewall										0.22		0.22	0	1	24	3	3	s.	Bryant Link Co.
Austin	Travis	593	55	55.0	− 3.2	84	11	20	30	40	1.51	− 1.02	0.68	0	5	15	3	12	se.	A. Deussen.
Ballinger	Runnels	1,637	15	50.8	− 3.7	88	11	10	29	55	0.76	− 0.66	0.66	0	2	18	4	8	n.	E. M. Eubank.
Barstow	Ward	2,573	4	51.4		87	11	11	29	54	0.85		0.46	0	4	25	4	1	n.	Lee F. Freeman.
Bay City	Matagorda	53	1								2.99		1.45	0	3	20	3	7	n.	E. C. Quereau.
Beaumont	Jefferson	29	10	56.9	− 8.0	86	6	25	29	35	2.09	− 1.92	0.89	0	8	13	0	17	ne.	John Bender.
Beeville	Bee	225	15	59.8	− 3.3	90	11	19	30	41	2.66	+ 0.38	2.31	0	4	6	12	12	n.	L. E. Dickey.
Big Spring	Howard	2,306	13	50.1		85	11	7	29	56	0.18	− 1.27	0.10	0	2	20	5	5	s.	B. Reagan.
Blanco	Blanco	1,350	15	52.0	− 5.0	88	16	13	30	41	1.74	− 0.49	1.13	0	4	14	13	3	nw.	R. C. Crist.
Boerne	Kendall	1,412	19	52.5	− 4.4	88	16	17	29	51	2.95	+ 0.23	1.62	0	6	11	3	16	n.	F. W. Schweppe.
Booth	Fort Bend	81	10								1.81	− 1.43	1.40	0	3	14	0	16	n.	T. R. Booth.
Bowie	Montague	1,113	16	51.8	− 3.0	89	11	15	29	46	0.20	− 2.28	0.11	0	3	13	14	3	n.	Craig Anderson.
Brady	McCullough	1,500	10																	G. W. Virling, jr.
Brazoria	Brazoria	25	22	60.0	− 2.8	86	6	16	30	45	5.41	+ 1.59	3.06	0	9	15	9	6	n.	Mrs. M. A. Stevens.
Brazos	Palo Pinto	801	2								0.57		0.35	0	2	14	9	7	s.	Robt. E. Boyett.
Brenham	Washington	350	26	55.5	− 5.5	87	10	21	30	36	2.27	− 1.49	1.70	0	8	12	2	16	n.	Mrs. B. F. Sloan.
Bridgeport	Wise	754	2								0.34		0.20	0	2	15	5	10	s.	Claude Strange.
Brighton	Nueces	12	18	62.2	− 4.2	86	6	22	30	38	1.73	− 0.62	0.65	0	4	15	3	12	nw.	G. H. Ritter.
Brownsville	Cameron	38	47	64.0	− 3.5	88	10	27	30	33	1.54	− 0.66	0.66	0	8				n.	U. S. Weather Bureau.
Brownwood	Brown	1,342	19	51.0	− 2.3	88	11†	14	30	58	0.84	− 0.79	0.71	0	3	16	8	6	n.	Mrs. Pearl Smith.
Cameron	Milam		3	54.6		88	11	15	30	60	1.76		1.11	0	10	21	6	3	s.	J. E. Watts.
Carmona	Polk	330	3	54.2		87	10	13	30	45	2.64		1.17	0	7	14	6	10	n.	M. S. Spitler.
Claytonville	Fisher	2,100	16	50.8	− 1.9	85	11	8	29	48	0.18	− 1.35	0.13	0	2	16	6	8	sw.	Wm. Lanius.
Clifton	Bosque	671									0.73		0.51	0	2	15	6	9	s.	R. M. Jones.
Coleman	Coleman	1,710	17	54.9	+ 0.2	88	11	11	29	51	0.63	− 0.97	0.38	0	3	11	11	8	n.	J. E. Stevens.
College Station	Brazos	308	21	57.2	− 1.2	87	10	20	30	51	1.87	− 1.97	1.11	0	9	13	5	12	s.	Prof. G. S. Frape.
Colorado	Mitchell	2,066	17	51.6	− 2.2	88	10	3	29	57	0.45	− 1.02	0.29	0	3	19	5	6	s.	R. M. Webb.
Columbia	Brazoria	34	22	61.6	− 0.6	87	11	14	30	56	4.65	+ 0.89	4.00	0	4	16	10	4	n.	R. B. Loggins.
Columbus	Colorado	206	7								1.86		1.46	0	4	9	8	13	n.	Mrs. Sophie Bridge.
Corpus Christi	Nueces	20	24	60.4	− 3.0	83	17	29	30	32	1.49	− 0.92	0.96	0	6	6	9	15	n.	U. S. Weather Bureau.
Corsicana	Navarro	445	22	52.0	− 4.0	85	10	19	30	51	1.15	− 2.11	0.82	0	3	15	3	12	n.	D. H. Winn.
Cotulla	La Salle	425	4								4.28		1.50	0	5					Holland Agriculture Co.
Crockett	Houston	350	7	56.0		87	10	18	30	49	3.50		1.75	0	5	16	5	9	e.	A. M. Rencher.
Cuero	DeWitt	177	21	55.4	− 7.0	86	11	17	30	44	4.15	+ 1.11	3.84	0	4	14	1	15	n.	H. R. Frobese.
Dallas	Dallas	466	22	51.9	− 2.7	88	10	15	30	57	1.08	− 1.88	0.62	0	6	16	0	14	n.	G. A. Eisenlohr.
Danevang	Wharton	145	15	59.4	− 3.6	84	6†	14	30	45	3.18	− 0.72	1.55	0	3	14	12	4	n.	H. P. Hermansen.
Decatur	Wise	1,047	15																	Ft. W. & D. C. Ry.
Del Rio	Valverde	952	5	53.6	− 5.6	86	15	18	29	42	2.65	+ 0.87	1.78	0	10	10	12	8	se.	U. S. Weather Bureau.
Devine	Medina	653	1	55.6		88	11	17	30	46	1.82		0.72	0	3	10	9	11	n.	M. A. Keller.
Dialville	Cherokee	575	7	54.4		86	10	21	29†	54	2.73		1.40	0	5	15	7	8	n.	J. M. B. McKnight.
Dilley	Frio	569	1								2.50		1.65	0	2					John W. Miller.
Dublin	Erath	1,466	15	51.1	− 4.3	87	10	12	29	54	0.71	− 1.07	0.60	0	2	12	9	9	s.	Jno. O. Shafer.
Duval	Travis	820	22	56.0	− 4.1	84	11	21	29	48	1.43	− 1.06	0.75	0	3	18	1	11	n.	J. C. Edgar.
Eagle Pass	Maverick	800	34	56.9	− 4.2	85	11	19	29	41	2.84	+ 1.74	1.50	T.	6	12	8	10	se.	Charles Tarver.
Eastland	Eastland	1,420	4	49.8		89	11	10	30	62	0.50		0.30	0	2	16	1	13	s.	Wm. D. Cook.
Edna	Jackson	71	2								2.63		2.53	0	2					E. L. Faires.
El Paso	El Paso	3,762	32	48.8	− 2.1	74	10	16	29	42	0.35	− 0.24	0.34	0.1	3	22	5	3	nw.	U. S. Weather Bureau.
Encinal	La Salle	558	3																	H. C. Braden.
Eola	Concho										1.26			0						E. W. Neal.
Fairland	Burnet	1,000	22	55.7	− 1.7	88	11†	18	29	54	1.14	− 1.07	0.39	0	6	16	7	7	s.	R. L. Bush.
Falfurrias	Brooks		3	62.3		96	17	20	30	45	1.76		0.73	0	4	15	8	7	nw.	W. A. Gardner.
Flatonia	Fayette	465	3	58.0		87	10	21	29	44	2.39		1.36	0	4	13	7	10	n.	Fred W. Laux.
Flint	Smith	483	1	53.6		84	10	16	30	57	2.75		1.16	0	7	15	3	12	s.	F. C. C. Carter.
Floydada	Floyd																			F. H. Schmidt.
Fort Clark	Kinney	1,050	40	50.6	− 1.1	73	16	20	28	29	3.35	+ 1.91	1.78	0	3	19	0	11	n.	Post Hospital.
Fort McIntosh	Webb	460	43	60.4	− 3.0	93	12	27	29	52	4.85	+ 3.83	1.50	0	4	12	4	14	e.	Do.
Fort Stockton	Pecos	3,050	14	53.4	+ 0.2	88	11†	14	29	51	0.25	− 0.47	0.20	0	2	15	10	5	nw.	H. H. Butz.
Fort Worth	Tarrant	670	16	51.8	− 3.3	85	10	21	12	55	1.05	− 0.52	0.48	0	5	13	7	10	s.	U. S. Weather Bureau.
Fredericksburg	Gillespie	1,742	22	53.2	− 2.8	82	15	18	30	48	1.47	− 0.96	0.83	0	6	19	2	9	n.	Arthur Striegler.
Gainesville	Cooke	738	21	49.8	− 2.9	83	11	15	30	42	0.25	− 2.02	0.25	0	1					J. L. Hickson.
Galveston	Galveston	69	40	58.4	− 4.5	79	6	26	29	34	5.06	+ 1.04	3.37	0	6	10	10	10	se.	U. S. Weather Bureau.
Gatesville	Coryell	795	7	51.1		77	7	14	29	42	1.30		0.50	0	3					John Ryan.
Georgetown	Williamson	750	16	51.6	− 6.3	86	15	13	30	53	1.29	− 1.67	0.86	0	8	20	2	8	s.	Prof. R. F. Young.
Gonzales	Gonzales	299	6								2.39		1.82	0	4	10	5	15	n.	J. M. Johnson.
Gorham	McLennan	444	2					16	30		1.50		1.00	0	2	14	13	3	n.	John Gorham.
Graham	Young	1,040	12	53.4	0.0	90	11	10	30	62	0.67	− 1.44	0.37	0	3	19	4	7	s.	C. W. Johnson.
Grand Falls	Ward		1								0.50		0.50	0	1	17	10	3		W. A. White.
Grand Saline	Van Zandt	399	1								1.53		0.62	0	3	19	7	4	ne.	Jas. Kirk.
Grapevine	Tarrant	670	21	54.6	− 1.6	87	10	18	29	55	1.04	− 1.60	0.41	0	3	8	12	10	s.	W. J. Crowley.
Greenville	Hunt	550	11	50.6	− 5.6	80	11	19	29†	44	1.26	− 2.07	0.40	0	6	16	0	14	n.	J. P. Regan.
Hallettsville	Lavaca	235	19	57.8	− 4.0	86	10	17	30	36	2.58	− 0.42	1.60	0	2	14	5	11	s.	Dr. J. E. Lay.
Hamlin	Jones	1,685									0.31		0.31	0	1					W. S. Carruthers.
Harlingen	Cameron	37									0.66		0.46	0	2	16	2	12	n.	Dr. C. W. Letzerich.
Harper	Gillespie										1.24		1.03	0	2	14	0	16		Christian Fritz.
Haskell	Haskell	1,553	16	49.4	− 4.1	90	10	11	29	45	0.39	− 1.08	0.27	0	2	22	1	7	n.	P. D. Sanders.
Hebbronville	Duval		4								1.90		1.20	0	3					Henry Edds.
Hempstead	Waller	254	7								1.37		0.40	0	6	7	7	16	n.	J. H. Hancock.
Henderson	Rusk	500	2								2.29		1.28	0	5	11	7	12		M. Kangerga.

TABLE 1.—*Climatological data for November, 1911. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Texas—Continued.																				
Hewitt	McLennan	664	16								1.24	− 1.48	0.54	0	4					I. H. Earle.
Hico	Hamilton										0.70		0.31	0	4	16	10	4	s.	John A. Eakins.
Hillsboro	Hill	628	8																	W. G. Escott.
Hondo	Medina	901	12	52.8		82	11	20	29†	38	2.22	+ 0.49	0.86	0	4	18	4	8	n.	H. E. Haass.
Houston	Harris	138	21	57.8	− 3.5	86	10	23	30	41	1.92	− 1.97	1.58	0	8	10	5	15	se.	U. S. Weather Bureau.
Huntsville	Walker	400	27	55.0	− 4.2	91	6	19	30	36	2.74	− 1.06	1.60	0	4	16	0	14	se.	W. Y. Barr.
Jayton	Kent		1																	Wichita Valley Ry. Co.
Jewett	Leon	496	7	51.8		87	10	18	30	49	2.15		1.20	0	2	20	5	5	n.	Earle Adkisson.
Junction	Kimble	1,645	10	46.2		80	22	9	29	46	1.20	− 0.28	1.02	0	2	15	5	10	n.	Judge John S. Durst.
Kaufman	Kaufman	448	12	53.5	− 4.3	85	10	20	29†	57	1.41		0.63	0	4	18	3	9	s.	B. J. Hubbard.
Kerrville	Kerr	1,650	15	53.1	− 4.3	87	15†	11	30	50	1.68	− 1.30	0.70	0	5	13	6	11	n.	Robert E. Horne.
Knickerbocker	Tom Green	2,050	7	53.2		84	11†	9	29	48	0.66		0.37	T.	4	18	7	5	s.	Jos. Tweedy.
Kopperl	Bosque	576	14								0.80	− 2.05	0.80	0	1	11	4	15	n.	T. A. Johnson.
Lagrange	Fayette	276	1								2.11		1.95	0	3	13	3	14	nw.	August Hermes.
Lamesa	Dawson	2,500	1								0.22		0.15	T.	2					S. D. Austin.
Lampasas	Lampasas	1,026	19	53.2	− 3.2	87	9†	12	30	64	0.97	− 1.18	0.81	0	4	16	2	12	n.	Mrs. K. I. Webber.
La Parra	Willacy	38	9								2.05		1.75	0	2					Jno. G. Kenedy.
Laureles Ranch	Nueces	20	11								1.00	− 1.32	1.00	0	1					Matt Cody.
Liberty	Liberty	38	7	56.6		86	6	16	30	43	2.24		1.52	0	5	14	7	9	n.	Mrs. Fannie Sneed.
Llano	Llano	1,040	20	52.0	− 5.8	86	11	15	30	50	0.97	− 0.36	0.67	0	5	17	9	4	ne.	E. W. Torrence.
Llano Grande	Hidalgo	86	3	59.9		92	16	16	30	48	0.94		0.53	0	2	8	9	13	n.	M. D. Wardlow.
Long Lake	Anderson	229	6								2.81		1.20	0	4	14	1	15	s.	Geo. W. Ellis.
Longview	Gregg	336	25	54.2	− 2.1	90	11	21	29†	45	2.92	− 1.18	1.62	0	5	17	0	13	ne.	C. A. Propst.
Lubbock	Lubbock										0.22		0.15	0.1	2	19	5	6	w.	A. L. Paschall.
Lufkin	Angelina	325	4	54.7		87	10	15	30	47	4.87		3.37	0	4	22	1	7	n.	T. A. King.
Luling	Caldwell	418	22	56.9	− 3.3	85	11	19	30	35	2.04	− 0.38	1.24	0	6	11	3	16	s.	John Carter.
McGregor	McLennan	713	1								0.90		0.90	0	1	25	0	5	n.	W. H. Whitley.
Marathon	Brewster	4,043	1	48.0		77	16	14	29†	51	0.90		0.90	T.	1	12	9	9	s.	Rev. A. P. Willis.
Marble Falls	Burnet	771	3								0.40		0.40	0	1	11	12	7	n.	R. H. Cochran.
Marfa	Presidio		3								0.20		0.20	0	1					R. K. Colquitt.
Marshall	Harrison	375	2	54.7		85	10	15	30	52	1.24		0.70	0	4	7a	16a	6a	s.	Lee Scott.
Matagorda	Matagorda	12	1								5.79		3.43	0	3	21	3	6	n.	W. E. McNabb.
Mexia	Limestone	537	7	51.6		85	10	17	30	49	1.50		1.06	0	7	9	7	14	s.	Miss Josephine Newman.
Midland	Midland		4	50.4		83	10	10	29	56	0.06		0.05	0	2	22	4	4	sw.	W. M. Midkiff.
Mission	Hidalgo	140	1	64.7		92	11†	26	29†	40	1.42		0.41	0	4	11	11	8	se.	Chas. M. Kennely.
Mont Belvieu	Chambers	65	1								1.73		1.57	0	3	11	12	7	n.	A. R. Shearer.
Mountain View	Pecos	2,900	1								0.30		0.12	0	4					Lucius W. Gosselin.
Mount Blanco	Crosby	2,750	22	45.4	− 3.9	80	10	10	29	40	0.24	− 1.12	0.24	2.0	1	20	2	8	n.	H. C. Smith.
Nacogdoches	Nacogdoches	271	12	52.2	− 6.2	87	10	16	30	42	5.00	+ 0.46	2.90	0	3	14	3	13	n.	Miss Mary Hofmann.
New Braunfels	Comal	720	22	54.4	− 5.0	85	11	18	30	36	1.65	− 0.54	1.65	0	1	15	10	5		J. Giesecke.
Palestine	Anderson	510	29	52.7	− 4.2	85	10	21	29	44	2.35	− 1.28	1.21	0	7	12	6	12	s.	U. S. Weather Bureau.
Panter	Hood	1,000	22								0.68	− 1.65	0.53	0	4					E. H. Snider.
Pearsall	Frio	629	1								2.03		1.13	0	5					Earnest De Vilbiss.
Pierce	Wharton	102	5	57.3		88	27	10	30	46	1.82		1.08	0	3	11	7	12		R. B. Pointer.
Plainview	Hale	3,370	15	43.6	− 7.7	77	10	6	29	50	0.36	− 1.10	0.26	0.5	4	20	5	5	w.	J. F. Sander.
Port Arthur	Jefferson										1.30		1.30	0	1					Griffing Bros. Co.
Port Lavaca	Calhoun	20	10	58.8	− 6.2	85	15	19	29	41	0.44	− 3.30	0.44	0	1	10	10	10	n.	J. H. Bickford.
Post City	Garza	2,700	1								0.12		0.11	0.5	2	24	3	3	s.	W. L. Dodd.
Putnam	Callahan	1,591									0.49		0.37	0	3	22	2	6	sw.	Rev. Joseph Reisdorff.
Raymondville	Cameron										1.55		0.50	0	8	2	12	16	n.	C. H. Pease.
Ricardo	Nueces	57	2																	Lindsay Waters.
Riverside	Walker	169	7								2.56		1.50	0	3	13	0	17	n.	Mrs. C. W. Higdon.
Robert Lee	Coke	1,850	12																	H. D. Pearce.
Rockland	Tyler	136	7								0.59		0.20	0	4	14	8	8	n.	T. W. Bellamy.
Rockport**	Aransas	12	10	59.6	− 4.0	76	11†	29	29	22	1.60	− 1.32	0.80	0	3	24	0	6	n.	Mrs. G. B. Grewe.
Rossville	Atascosa	558	4	57.4		86	10†	17	29	44	2.04		0.58	0	6	14	8	8	se.	W. F. M. Ross.
Runge	Karnes	308	16								4.39	+ 2.34	3.92	0	2					Reiffert & Frobese.
Sabinal	Uvalde	964	7	56.0		83	11†	19	29†	36	2.90		1.50	0	5	10	6	14	se.	Jas. Johnston.
Salado	Bell		1								1.18		1.18	0	1	10	2	18	s.	L. M. Crockett.
San Angelo	Tom Green	1,847	20	51.8	− 0.7	84	14	12	29	48	0.63	− 0.68	0.63	T.	1	18	6	6	n.	Sam Crowther.
San Antonio	Bexar	701	26	56.0	− 3.2	87	11	23	29	33	2.01	+ 0.23	1.20	0	8	10	7	13	n.	U. S. Weather Bureau.
San Augustine	San Augustine	360	2	54.2		84	10	14	30	47	4.06		2.04	0	6	14	6	10		F. A. Wilson.
San Juanito	Hidalgo		2			94	11				2.13		1.02	0	5	6	1	23	n.	J. B. McAllen.
San Marcos	Hays	588	18	55.1	− 5.3	88	11	17	30	38	1.99	− 0.56	1.45	0	4	16	0	14	n.	Miss L. C. Ford.
San Saba	San Saba	1,712	10	52.9	− 4.4	85	10	11	30	49	0.81	− 1.45	0.38	0	4	22	4	4	n.	Jas. Burns.
Santa Gertrudes	Nueces		11																	J. B. Wright, jr.
Sealy	Austin	201									2.44		2.21	0	5	9	4	17	ne.	O. H. Albert.
Seymour	Baylor	1,320	5	47.4		89	10	7	29	65	T.		T.	0	0	18	0	12	s.	S. C. Lee.
Snyder	Scurry			47.2		86	11	4	29	49	0.26		0.18	0	2	15	8	7	n.	J. Allen Weaver.
Somerville	Burleson	251	2	57.4		85	11†	15	30	44	2.05		1.10	0	3	15	3	12	n.	Ed. Herbst.
Spur	Dickens	2,300		46.8		84	10	10	29	50	0.39		0.23	0.2	3	22	3	5	n.	J. D. Reagan.
Stamford	Jones			47.3		80	11	10	29	46	0.43		0.30	0	2	20	6	4		T. A. Williams.
Stowell	Chambers										2.90		1.60	0	3	19	0	11	n.	Arthur Bailey.
Sutherland Springs**	Wilson	424	1	56.8		88	11	12	30	42	1.87		1.43	0	4	14	2	14	n.	W. A. Clark.
Taylor	Williamson	583	10	53.6	− 4.1	86	11	19	30	45	1.52	− 1.12	1.21	0	7	17	6	7	n.	U. S. Weather Bureau.
Temple	Bell	630	21	53.5	− 3.3	85	11	21	29	33	1.27	− 1.51	1.05	0	5	15	8	7		W. Goodrich Jones.
Theodore	Winkler		1								0.45		0.20	0	3					W. H. Gibbs.
Thurber	Erath		1								0.60		0.40	0	2					J. K. Ball.
Tilden	McMullen		5																	Wm. Kuykendall.
Tivoli	Refugio		1								1.47		1.47	0	1	6	13	11		W. H. Gislar.
Uvalde	Uvalde	937	3			85	11	17	30		3.00		1.52	T.	2					F. M. Getzendaner.
Valentine	Jeff Davis	4,421	5	48.0		79	11	3	29	51	0.30		0.15	0	4	21	5	4	se.	Valentine Development Co.
Valley Junction	Robertson	289	11								2.05	− 1.39	1.35	0	2	16	2	12	s.	Frank Fitzpatrick.
Victoria	Victoria	187	12	60.1	− 4.7	87	6	18	30	43	2.37	− 0.84	1.30	0	3	14	0	16	n.	C. C. Zirjacks.
Waco	McLennan	424	22	53.0	− 4.9	88	10†	19	30	46	2.30	− 0.37	1.60	0	3	16	0	14	s.	E. H. Hall.
Waxahachie	Ellis	556	14	51.5	− 4.2	87	10	14	29	61	1.19	− 1.73	0.55	0	4	14	1	15	n.	C. D. Longserre.
Weatherford	Parker	864	22	49.4	− 5.9	84	10†	17	29†	45	0.95	− 0.98	0.40	0	5	18	4	8	s.	Miss J. Stickfort.
Wharton	Wharton	105	9																	Mrs. F. M. Hughs.
Wills Point	Van Zandt	524	6	54.8		91	11	15	30	59	0.60		0.50	0	2	15	1	14	n.	W. W. Gibbard.
Winters	Runnels										0.00		0.00	0	0					Ed. P. Eason.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1911. District No. 8, Texas and Rio Grande Valley.*

Stations.	Watershed.	Day of month.																												Tota
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Colorado.																																
Blanca	Rio Grande																															
Cumbres	do		.48			.24			.38	.27	.40	.21					.24							T.			*	.26				2.48
Garnett	do					T.						.07					T.						.30								0.37
Hermit	do	T.	.09			.12			.27	.38	T.	.40		T.			T.						.09			T.	T.				1.35
La Veta Pass	do					T.			.09			T.											.47			1.11					1.67
Manassa	do									.03																	*	.10				0.13
Platoro	do	.02	.17			.11			.35	.34	.10	.38					.03											.05				1.55
Saguache	do		T.			T.			T.			.29										T.									0.29
San Luis	do		.15			T.			.02	.05		.06					T.					T.	.36			.08					0.72
Wagon Wheel Gap Experiment Station.	do	.27	T.			.06			.17	.11	.12	.24		T.			.02					.08				T.	.06				1.13
New Mexico.																																
Agricultural College	Rio Grande																															0.00
Alamogordo (near)	do					.10									.32		.32					T.					T.	.08				0.18
Alamogordo	do	T.					.08		T.	T.		.05											.04					.19				1.00
Alamos Ranch	do		.54	.18				T.						T.													T.	T.			0.34
Albuquerque	do					.34																T.									T.
Ancho	do																															
Anchor Mine	do	.14	.54						.38						.32		.32					.40	.48	.25	.60	.38		T.	.20			4.01
Artesia	Pecos	.13	*	.20		.07	.07																									0.47
Aspen Grove Ranch	Rio Grande	.42				.19			.28	.11		.43		.14									.12					.09				1.78
Bateman's Ranch	do	.10	.20			.75			.20	T.	T.	.40			.30		T.							.12			.05	T.				2.12
Berino	do				T.	.09																										0.09
Bluewater	do		.24			.15																					T.					0.39
Boaz	Pecos		.08			.10																										0.18
Capitan	do	.10		.10																												0.50
Carlsbad	do	.05	.15																									.30				0.20
Carrizozo	Rio Grande					.02																										0.02
Chama	do		.24			.24			.16		.70	.27		T.			T.										.04					1.65
Cloudcroft	Pecos					.13																		.07				T.	.13			0.33
Corona	do	.20																						.09				.10				0.39
Coyote	Rio Grande					.03								.01																		0.04
Cundiyo	do	*	.48											.09										.16				.35				1.08
Demonstration Farm.	Pecos	.04																									.05					0.09
Duran	do	*	.15			T.									T.									.20				.37				0.72
Escondido	Rio Grande				.03																								.12			0.15
Espanola	do		.72		*	.20									.14								.12	.05				.02	.10			1.35
Estancia	do																								.14		T.					0.14
Fort Stanton	Pecos		.05			.05																		.01					.05			0.16
Fort Sumner	do																															
Gallinas	do													T.																		0.21
Gallinas Planting Station.	do	*	.30			.07			T.	T.		.20			T.							T.	.05			.11		T.	.20	.10		0.82
Glorieta Ranch	Rio Grande																															0.00
Harvey's Upper Ranch.	Pecos	.18	T.			.17						T.					T.				T.	.28					.14	.43				1.20
Hillsboro	Rio Grande																															
Hodges	do																															0.00
Hondo Reservoir	Pecos	.12	.10																													
Jemez Springs	Rio Grande	*	.80			.30			.05	.03		.03		.12	.34									.02				T.				0.24
Knowles (near)	Pecos		.15			.02																		.20			T.	.10	.05			2.02
Laguna	Rio Grande					T.						T.																T.				0.17
Lagunita	Pecos																												.16			0.16
Lake Valley	Rio Grande													T.																		
Lakewood	Pecos																												T.			T.
Las Vegas	do	*	.20			.04						T.												.05				.01				0.30
Liston	do																															0.00
Los Lunas	Rio Grande				.03																											0.03
Magdalena	do			T.										T.										T.				T.	T.			T.
Mescalero	do	T.	T.			.03																		T.				T.				0.03
Mineral Hill	Pecos		.30																					.15				.20				0.65
Monterey	Rio Grande	T.	T.	T.	T.																								T.			T.
Mountainair	do		T.																					T.								T.
Newman	do					T.	.10																									0.10
Noria	do				T.	.20																										0.20
Orange	do																															
Orogrande	do				.07																											
Oscura	do		.02			.02																							.07			0.07
Otis	Pecos	.08	.26	T.	.04	T.																						T.				0.11
Otto	Rio Grande	.04				.91																					.05		.02			0.38
Pastura	Pecos	*	.25																								*	.21				1.02
Placitas (near)	Rio Grande					.40																		.14				.21	T.			0.46
Plainview	Pecos																															0.75
Red River Canyon	Rio Grande	*	.42						.42								T.					.14	.26	.14			*	.24				1.62
Rincon	do																												T.			T.
Rio Grande Dam	do																											.02				0.54
Rio Grande Industrial School.	do					.52																										
Rosedale	do																				T.							T.				T.
Roswell	Pecos	.35			.06	.02																		.01				.02				0.46
San Marcial	Rio Grande																															0.00
San Rafael	do																											.04				0.04
Santa Fe	do	.03	.17			.20			T.			.02		.40								.10	.05			.14	.23	T.			1.34
Santa Fe Canyon	do		.41			.36								.47									.14				.53	.10			2.01
Santa Rosa	Pecos		.28			T.															T.		T.				.13				0.41
Socorro	Rio Grande																				.08											0.08
South Fork	do																															
Stanley	do																															
Strauss	do				29																											0.29
Taft	Pecos	T.	.20																													0.40
Tajique	Rio Grande	.30					.21															.16						20				0.79
Taos	do	.45	T.			.10			.03			.04											.12					.07	.05			0.81
Taos Canyon	do	T.	.39			.55			.25	T.				.17			T.					.14				.19	.07				1.73
Tecolote	do	.01	T.											T.								*	.08			*	.04				0.16
Three Rivers	do																											.07	T.			T.
Tijeras Canyon	do	T.				.87																	T.						.06			0.93

TABLE 2.—*Daily precipitation for November, 1911. District No. 8*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
New Mexico—Contd.																																
Torrance	Rio Grande	.04			T.				.05	.04		.11			T.		T.						.08					.30				0.42
Tres Piedras	do	.24				T.																	*	.10				.20				0.74
Truchas	do	T.	.90			.12	.02		T.			T.		T.	.38									.49				.47	.09			2.47
Tularosa	do																															0.00
Vaughn	Pecos	.16	T.			T.																		.16				.21				0.53
Virsylvia	Rio Grande	.16								.02													.20				.09	.07				0.54
Winsors	Pecos	.03	1.23			.19						.07		.13	.23								.02					.31	.14	.07		2.42
Texas.																																
Abilene	Brazos		T.		.02	.09		.20																								0.31
Albany	do					.17																										0.17
Alice‖	Coast			.50	.02				1.00																			.04				1.56
Alpine	Pecos						.15																									0.15
Alvin	Coast							.84	1.41		T.		.02															.01				2.28
Anahuac	do							.55	1.24									.15										.45				2.39
Antelope	Trinity					.22		.05															.29									0.56
Aspermont	Brazos				.22																											0.22
Austin	Colorado			.06				.68	.62								.01	.14														1.51
Ballinger‖	do					.10			.66																							0.76
Barstow	Pecos	.26	.46	.05		.08																										0.85
Bay City‖	Colorado							1.30	1.45											.24												2.99
Beaumont‖	Neches						(*)	.18	.89				.17						.19					.07				.05	.54			2.09
Beeville	Coast		T.	.22				T.	2.31			T.							.08						.05							2.66
Big Spring	Colorado		T.	T.		.10		.08																								0.18
Blanco‖	Guadalupe			.04				.51	1.13															.06								1.74
Boerne	San Antonio		.55	.06			.59	1.62									.10						.03				T.					2.95
Booth‖	Brazos								1.40										.16					.25								1.81
Bowie	Trinity					.11		.07															.02									0.20
Brady	Colorado																															
Brazoria	Brazos			.01				3.06	1.35	T.	.05		.14		T.			.14					.17	.06				.43				5.41
Brazos‖	do					.22			.35																							0.57
Brenham‖	do			.02	.05			.30	1.70				.05					.10					.04					.01				2.27
Bridgeport‖	Trinity						.14		.20																							0.34
Brighton	Coast		.13					.45	.65																			.50				1.73
Brownsville	Rio Grande		T.	T.					.16				.30				.10	.02						.18	.06		.06	.66				1.54
Brownwood‖	Colorado					.10		.03	.71															T.								0.84
Cameron	Brazos			T.	.09	.01	.02	.06	1.11	.02			.06							.09				.28	.02							1.76
Carmona	Neches							.45	1.17		T.	T.	.21					.05					.09	.40				.27				2.64
Claytonville	Brazos	T.		.05	.13																											0.18
Clifton	do					T.		.51	.22														T.	T.								0.73
Coleman	Colorado		T.	T.		.13		.38	.12														T.									0.63
College Station	Brazos			.01				.45	1.11	.01	.02	T.	.01					.16					T.	.07				.03				1.87
Colorado	Colorado					.29		.08	.08																							0.45
Columbia	Brazos		.25	.33			4.00																					.07				4.65
Columbus‖	Colorado	1.46		.04					.30									.06						T.	T.							1.86
Corpus Christi	Coast		.02	T.		T.		.30	.66		T.	T.	.01					T.						T.			.01	.49				1.49
Corsicana‖	Trinity					T.	T.		.82				T.					T.	T.				.03	.30								1.15
Cotulla	Nueces	1.25	1.00					1.50		.30														.23								4.28
Crockett	Trinity							.40	.90				.20					T.						1.75				.25				3.50
Cuero‖	Guadalupe			.06				.37	3.47																.25							4.15
Dallas‖	Trinity					.14	.02		.62									.24					.04	.02								1.08
Danevang	Coast							1.10	1.55									.53														3.18
Decatur	Trinity																															
Del Rio	Rio Grande	T.	.47	.14	.01	.03	.16	1.78		.01	.02	.01					.02	T.														2.65
Devine	Nueces		.72	T.	T.		T.	.70	.40	T.	T.						T.	T.						T.								1.82
Dialville	Neches			T.		T.		1.40				.15						.15					.75					.28				2.73
Dilley	Nueces		1.65					.85																								2.50
Dublin‖	Brazos					.11	T.		.60														T.									0.71
Duval	Colorado			.07		T.		.61	.75									T.					T.									1.43
Eagle Pass	Rio Grande	T.	.87	.63	T.	.03	.30	.97	.04																				T.			2.84
Eastland‖	Brazos			T.		.20		T.	.30																							0.50
Edna	Lavaca					T.		2.53									.10															2.63
El Paso	Rio Grande			T.	.32	.02																							.01			0.35
Encinal	Nueces																															
Eola	Colorado																															‡1.26
Fairland	do	T.	T.	.05		.06		.38	.39									.05					.21									1.14
Falfurrias	Coast		.50	.10				T.	.43																			.73				1.76
Flatonia	Guadalupe			.06		T.		1.36	.90				.07					T.					T.	T.								2.39
Flint	Neches			T.		.01		(*)	1.16	T.	T.		.05		T.			.72					T.	.71				.10				2.75
Floydada	Brazos																															
Fort Clark‖	Rio Grande	T.	.76				1.78	.81																								3.35
Fort McIntosh	do	1.50	1.50	1.10		T.		.75																								4.85
Fort Stockton	Pecos		.20		.05	T.		T.																								0.25
Fort Worth	Trinity					.10		.37	.11									.40					.01									1.05
Fredricksburg	Colorado			.09	T.	.04		.83	.38									.07					.06									1.47
Gainesville	Trinity					.25																										0.25
Galveston	Coast			T.				3.14	.88			T.	.08					.05						.01				.90				5.06
Gatesville	Brazos							.40	.40														.50									1.30
Georgetown‖	do			.02	.02	.06		.20	.86		T.						.05		.01					.07				T.				1.29
Gonzales‖	Guadalupe			.06				.42	1.82										.09					T.								2.39
Gorham‖	Brazos							1.00																.50								1.50
Graham	do					.07		.37																.23								0.67
Grand Falls	Pecos		.50		T.																											0.50
Grand Saline	Sabine								.62		T.							.31					.60									1.53
Grapevine	Trinity			T.		.32			.41									.31					T.									1.04
Greenville‖	Sabine					.24			.40				.10					.30					.12	.10								1.26
Hallettsville	Lavaca			T.		T.	T.	1.60	.98			T.						T.					T.	T.								2.58
Hamlin	Brazos		T.			.31																										0.31
Harlingen	Coast		.46						.20																							0.66
Harper	Colorado					.21		1.03																								1.24
Haskell‖	Brazos					.27	.12																									0.39
Hebbronville	Coast		1.20					.65																				.05				1.90
Hempstead‖	Brazos				.16			.20	.30	.11			T.						.40					.20								1.37
Henderson	Neches							T.	1.28				.06					.08					.62				.25					2.29
Hewitt	Brazos			T.				.36	.54									T.					.21	.13								1.24
Hico	do					.05	.30	.31																.04								0.70
Hillsboro	do																															
Hondo‖	Nueces		T.	.86	.04	T.		.62	.70									T.										.07				2.22
Houston	Coast			T.		T.	T.	.55	1.04		.01		.03		T.			.02					.15	.05								1.92
Huntsville‖	Trinity							T.	1.60	T.			.20						T.					.71				.23	T.			2.74
Jayton	Brazos																															
Jewett‖	Trinity					T.		1.20										T.					.95					T.				2.15

TABLE 2.—*Daily precipitation for November 1911. District No. 8*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Texas—Continued.																														
Junction	Colorado		.18					1.02																						1.20
Kaufman	Trinity				T.			.63	.35								T.	.40					.03							1.41
Kerrville ‖	Guadalupe			.23	.04	.65		.66	.70																					1.68
Knickerbocker	Colorado	.03	T.		T.	.21		.37	.05															T.						0.66
Kopperl ‖	Brazos					T.			.80																					0.80
Lagrange	Colorado			.08					1.95									T.					.08								2.11
Lamesa	...do		.07				.15																							0.22
Lampasas ‖	Brazos			.07			.02		.81															.07							0.97
La Parra	Coast	T.																						1.75			.30				2.05
Laureles Ranch	...do							1.00																							1.00
Liberty ‖	Trinity							.06	1.55				.07						.30					T.	T.			T.	.26		2.24
Llano ‖	Colorado			.05	T.	.03	T.	.05	.67									T.						.17							0.97
Llano Grande ‖	Rio Grande								.41																			.53			0.94
Long Lake ‖	Trinity								1.14										.37					1.20					.10		2.81
Longview ‖	Sabine								.98				.05					.07						1.62					.20		2.92
Lubbock	Brazos		.15	T.		.07		T.											T.		T.							T.			0.22
Lufkin	Neches						.42	1.05																3.37			.03				4.87
Luling ‖	Guadalupe			.10				.40	1.24			T.						.10	.15					.05							2.04
McGregor	Brazos							.90																							0.90
Marathon	Rio Grande				T.			.90																					T.		0.90
Marble Falls ‖	Colorado			T.				.40																							0.40
Marfa	Rio Grande				.20																										0.20
Marshall	Sabine							.22					.10					.22						.70							1.24
Matagorda	Coast							3.43	1.95													.41						.02			5.79
Mexia ‖	Brazos				T.	.03	T.		1.06	.02			T.			T.		.08	.03					.26							1.50
Midland	Colorado		.01					.05																							0.06
Mission ‖	Rio Grande		.26	.41					.35																				.40		1.42
Mont Belvieu	Coast			T.				T.	1.57				.07					.09						T.							1.73
Mountain View	Pecos	T.	.12	T.		.12	T.	.03	.03																						0.30
Mount Blanco	Brazos		.24																												0.24
Nacogdoches ‖	Neches						T.	T.	1.80	T.	T.		T.			T.							T.	2.90			T.	.30			5.00
New Braunfels	Guadalupe							.45	1.20																						1.65
Palestine	Trinity			T.		T.		.96	.25		T.	.08					T.	.18					.40	.40			.08				2.35
Panter	Brazos					.10		.53																							0.68
Pearsall	Nueces	.12	1.13	.03			.10	.65														.01			.04						2.03
Pierce	Colorado							.20	1.08									.54													1.82
Plainview	Brazos	.02	.04	.04		.26																									0.36
Port Arthur	Coast																														1.30
Port Lavaca	...do		T.					.44																			1.30				0.44
Post City	Brazos		.11	.01																							T.				0.12
Putnam	...do		T.		T.	.12		.30	.07												T.										0.49
Raymondville ‖	Coast		.18	.45	.01				.26	.02			.02	T.											.11		T.	.50			1.55
Ricardo	...do																														
Riverside ‖	Trinity							T.	1.50															.86				T.	.20		2.56
Robert Lee ‖	Colorado																														
Rockland ‖	Neches								.19			.10										.20					.10				0.59
Rockport	Coast							.80	.30																			.50			1.60
Rossville	Nueces		.45	.39		T.	T.	.58	.52		.05							T.					.05								2.04
Runge	San Antonio		.47					3.92																							4.39
Sabinal	Nueces		.80	.52		.08		1.10	.40																						2.90
Salado	Brazos							1.18																							1.18
San Angelo	Colorado		T.	T.	T.	T.	T.	.63	T.															T.							0.63
San Antonio	San Antonio		.39	.27			.02	1.15	.05		.03							.02					.08								2.01
San Augustine	Neches						T.	.30	.93			T.	.45					.16					T.	2.04				.18			4.06
San Juanito	Coast		1.02	.08					.46				.35											T.		T.		.22			2.13
San Marcos ‖	Guadalupe			.04				.40	1.45										.10												1.99
San Saba	Colorado			T.				.37	.38									.04					.02								0.81
Santa Gertrudes ‖	Coast																														
Sealy	Brazos			.03				1.19	1.02			T.	T.					.14					.06					T.			2.44
Seymour	...do		T.	T.	T.	T.		T.																							T.
Snyder ‖	Colorado			.08		.18																									0.26
Somerville	Brazos							.67	1.10									.25					T.								2.05
Spur ‖	...do		.03	.13	T.	.23																	T.								0.39
Stamford	...do					.30		.13																							0.43
Stowell	Coast							1.60																.60				.70			2.90
Sutherland Springs	San Antonio		.20	.16				1.43			T.												.08	T.							1.87
Taylor	Brazos			.03		T.	T.	1.12	.15									.16					.04	.01				.01			1.52
Temple ‖	...do				.05	.05			1.05									.03					.09								1.27
Theodore	Pecos		.20	.15	.10																										0.45
Thurber	Brazos					.20		.40																							0.60
Tilden	Nueces																														
Tivoli ‖	Guadalupe						1.47																								1.47
Uvalde	Nueces	T.		1.52					1.48	T.	T.																		T.		3.00
Valentine	Rio Grande			.05	.05	.15		.05																							0.30
Valley Junction ‖	Brazos								1.35															.70							2.05
Victoria ‖	Guadalupe			.22				1.30	.85																						2.37
Waco ‖	Brazos								1.60									.22						.48							2.30
Waxahachie ‖	Trinity					T.	.06		.55	T.								.24					T.	.34							1.19
Weatherford ‖	...do			.04		.22	.04		.40															.25							0.95
Wharton ‖	Colorado																														
Wills Point	Sabine					T.		.10	.50																						0.60
Winters	Colorado																														0.00

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations, November, 1911. District No. 8, Texas and Rio Grande Valley.*

Date.	Colorado.				New Mexico.																Texas.							
	Garnett.		San Luis.		Agricultural College.		Carlsbad.		Fort Stanton.		Mountain-air.		Rosedale.		Roswell.		Santa Fe.		Santa Rosa.		Abilene.		Big Spring.		Browns-ville.		Corpus Christi.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	43	19	49	22	70	36	60	39	47	23	50	24	50	30	43	29	47	28	35	25	67	38	67	35	82	66	76	62
2....	46	23	41	16	53	40	39	31	32	19	38	15	40	29	29	24	31	20	55	15	39	32	55	28	74	58	68	51
3....	50	15	49	15	52	38	42	27	52	26	40	24	49	28	38	29	43	22	63	30	44	31	46	31	60	50	56	46
4....	51	14	52	20	56	32	46	31	61	19	54	24	51	29	43	34	46	20	55	23	59	43	64	41	68	51	63	52
5....	44	22	48	25	65	45	70	45	56	36	53	30	52	34	68	41	41	31	59	28	66	51	73	49	85	56	78	59
6....	54	16	52	19	64	41	75	48	60	39	50	31	58	31	69	37	49	28	61	38	77	47	77	44	84	65	74	67
7....	53	16	45	24	63	42	65	46	56	33	56	23	55	28	54	35	44	27	55	32	60	46	65	44	88	65	72	59
8....	51	26	46	30	69	39	74	30	58	28	52	32	52	30	70	30	47	31	63	30	68	45	75	40	80	60	70	58
9....	66	20	45	27	70	49	79	49	63	31	60	30	60	40	76	44	53	34	66	40	80	56	78	52	87	58	81	58
10....	67	17	58	32	74	40	83	45	70	36	43	19	60	40	79	41	54	36	70	43	80	57	84	52	88	72	81	73
11....	58	10	46	10	69	42	80	57	60	42	33	21	54	39	72	37	46	17	61	33	87	28	85	51	86	76	82	74
12....	28	− 4	35	− 5	50	31	71	25	48	20	43	12	41	16	40	21	35	12	48	13	37	20	52	19	79	46	74	42
13....	45	9	45	10	39	34	60	28	64	21	58	23	53	25	54	26	44	24	67	23	54	25	58	26	53	42	52	39
14....	40	5	49	28	71	36	80	30	62	42	56	28	60	42	74	34	47	25	63	38	82	41	82	26	76	48	68	49
15....	41	10	56	16	71	34	76	37	66	35	.....	25	58	33	71	32	53	26	72	35	80	48	79	41	83	58	71	60
16....	45	13	44	28	69	34	74	34	66	25	.....	28	54	35	77	31	48	27	66	34	80	56	81	52	85	72	77	66
17....	51	10	44	14	57	31	79	40	54	27	.....	28	52	26	57	30	39	21	56	25	67	39	71	46	86	71	83	57
18....	51	9	53	13	63	28	76	45	57	29	.....	24	55	25	68	24	46	26	67	35	72	34	71	26	70	51	66	51
19....	50	8	54	18	67	29	74	23	65	23	.....	27	60	30	73	25	50	23	75	38	75	37	76	26	76	46	68	49
20....	56	14	63	19	67	28	79	32	67	27	.....	26	60	32	70	28	59	31	69	26	73	40	79	33	81	52	72	56
21....	55	10	52	22	72	34	75	34	65	20	.....	30	60	30	63	28	54	27	69	24	71	37	74	32	82	58	71	64
22....	44	9	51	17	63	31	79	33	59	30	54	27	55	25	68	31	49	26	60	35	75	48	76	36	85	62	75	67
23....	33	− 5	42	3	52	28	75	36	49	24	45	25	47	25	48	28	36	21	48	26	49	32	58	37	83	56	74	52
24....	33	− 6	46	− 5	52	19	60	22	54	6	52	8	48	20	57	18	42	19	61	19	58	24	59	18	54	47	57	43
25....	40	− 6	46	− 2	55	21	65	24	56	15	52	14	50	22	65	23	45	18	63	19	59	31	62	18	58	47	55	47
26....	38	0	41	17	57	9	70	22	62	15	56	25	55	22	70	17	43	17	62	32	67	34	67	24	65	48	59	44
27....	37	− 5	26	8	48	23	59	18	47	18	37	17	42	20	43	27	24	7	56	22	49	28	54	31	61	50	65	47
28....	20	− 8	20	−15	35	16	39	21	31	− 3	26	5	28	0	33	13	16	− 8	31	8	32	18	32	18	50	42	47	38
29....	22	−15	30	−13	46	7	55	11	39	1	37	2	34	5	48	10	28	− 7	44	6	42	14	50	7	52	29	48	30
30....	42	− 8	43	− 7	52	16	57	15	51	14	46	4	48	15	56	12	37	12	56	18	60	23	59	13	53	27	54	29
Mns..	45.1	7.9	45.6	13.5	60.4	31.1	67.2	32.6	55.9	24.0	47.4[a]	21.7	51.4	26.9	59.2	28.0	43.2	21.4	59.2	27.4	63.6	36.8	67.0	33.2	73.7	54.3	67.9	53.0

Date.	Texas.																											
	Del Rio.		El Paso.		Fort McIntosh.		Fort Stockton.		Fort Worth.		Galveston.		Halletts-ville.		Houston.		Lufkin.		Palestine.		Plainview.		San Antonio.		Seymour.		Taylor	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	64	58	69	48	75	57	68	47	61	40	70	59	73	52	71	53	68	42	65	44	57	33	69	52	60	32	70	45
2....	61	43	48	37	68	41	56	30	43	36	59	48	55	51	58	47	69	42	50	42	34	18	60	43	45	20	50	43
3....	46	42	52	34	50	39	45	30	44	38	50	44	53	42	54	41	78	49	47	38	39	21	49	39	52	20	50	39
4....	55	44	56	36	59	41	60	38	55	43	65	47	68	53	60	45	65	39	60	43	55	33	58	48	63	32	57	47
5....	62	50	64	46	77	46	75	50	66	47	70	58	75	59	75	53	64	42	76	53	67	43	71	53	70	40	75	54
6....	76	56	61	47	79	54	77	43	70	54	79	66	79	63	82	67	81	64	77	63	67	34	78	60	75	35	78	60
7....	61	55	58	44	75	54	67	48	63	51	72	58	63	58	71	57	73	54	66	53	59	36	65	55	70	41	64	52
8....	71	51	69	39	75	53	80	42	62	51	65	57	68	62	70	56	72	55	63	53	69	33	72	54	72	34	68	52
9....	73	57	71	50	87	52	84	53	81	55	76	63	79	63	82	57	81	55	74	56	75	35	75	54	87	43	77	56
10....	77	54	74	49	90	64	87	43	85	60	77	71	86	70	86	70	87	64	85	65	77	38	81	65	89	45	83	68
11....	83	52	73	47	90	54	88	52	85	30	78	72	84	75	83	74	83	73	82	38	74	24	87	54	87	22	86	41
12....	52	34	51	37	93	41	72	21	39	21	74	40	75	37	76	35	78	31	39	26	39	13	54	37	38	10	41	30
13....	50	34	62	37	62	37	78	29	47	22	50	35	53	32	52	31	52	24	48	24	54	23	51	33	55	16	49	25
14....	67	37	71	46	76	43	85	42	75	39	70	50	72	46	74	45	71	33	71	40	71	38	71	49	84	32	74	54
15....	86	44	70	42	89	44	83	49	77	43	69	60	77	51	80	55	78	39	75	48	74	30	83	51	75	28	82	49
16....	78	58	72	46	90	64	88	45	81	58	73	67	81	65	79	65	79	48	78	62	74	29	82	66	82	40	81	64
17....	71	43	57	41	85	65	76	50	73	45	77	54	79	69	82	53	80	55	72	48	59	31	74	50	79	27	74	45
18....	68	41	64	32	78	40	75	32	71	37	62	51	69	43	68	45	79	50	68	39	67	24	68	43	73	35	69	35
19....	68	33	64	33	80	34	81	37	77	41	67	53	68	35	72	44	74	32	72	47	72	27	72	42	79	25	72	39
20....	73	34	71	29	84	43	75	40	79	44	70	57	71	38	77	46	70	34	75	46	71	30	75	42	71	24	74	39
21....	74	44	72	40	82	53	80	32	74	43	67	55	73	44	73	48	65	40	72	41	70	26	74	47	74	23	73	42
22....	76	56	66	43	85	61	77	42	71	58	73	67	71	56	74	58	65	34	69	53	55	34	70	62	79	30	73	59
23....	57	43	54	38	79	50	62	35	59	36	71	51	59	54	67	48	68	32	60	39	56	26	62	46	65	30	63	40
24....	58	31	53	28	65	40	61	25	52	29	54	40	58	34	54	36	52	29	50	31	61	19	57	36	58	20	52	31
25....	62	39	58	28	59	41	62	25	62	30	51	44	61	42	55	36	50	23	56	32	58	24	58	36	57	22	59	26
26....	64	35	60	26	64	35	63	30	66	35	64	47	64	30	63	38	62	25	60	38	60	39	63	40	72	26	64	34
27....	58	37	51	30	66	43	57	33	53	34	64	44	58	52	64	42	62	45	56	36	30	24	62	40	60	24	58	36
28....	42	29	36	22	62	39	37	19	34	26	44	34	52	34	42	33	50	22	38	27	28	11	42	30	40	23	40	26
29....	53	18	42	16	54	27	51	14	42	23	39	26	43	25	40	23	52	29	36	21	45	6	48	23	42	7	40	20
30....	60	21	49	17	65	28	63	19	61	21	50	34	53	17	52	23	55	15	52	24	60	16	56	23	65	20	57	19
Mns..	64.9	42.4	60.6	36.9	74.8	46.1	70.4	36.5	63.8	39.7	65.0	51.7	67.3	48.4	68.2	47.5	68.8	40.6	63.1	42.3	59.8	27.3	66.2	45.8	67.3	27.5	65.1	42.0

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1911.

DISTRICT No. 9, COLORADO VALLEY.

FREDERICK H. BRANDENBURG, District Editor.

GENERAL SUMMARY.

Changes in pressure were marked during the first half of the month, and several severe storms crossed the district. During the latter half of the month the pressure was generally high on the west slope of the Continental Divide, and approached the stability that usually marks the beginning of winter in the Colorado Valley. The month was cold, and in many localities in the central and northern parts of the district the mean was the lowest observed in November. Temperatures of zero or lower occurred in Wyoming; at five-sixths of the stations in Colorado; at half the stations in Utah; and at several in New Mexico. In parts of Wyoming the extremes were the lowest of record for November and in parts of western Colorado the lowest in 15 years. On the 11th, near Silverton, Colo., two men lost their lives by freezing. As a whole the month was drier than usual, the Grand Valley alone receiving about the normal precipitation. High winds were common, and severe gales were general on the 10th, 11th, 26th, and 27th.

Progress has been made in repairing the damage to railroads by the floods of October 4 and 5 in the San Juan and Dolores Rivers, the main line of the Denver & Rio Grande Railroad from the east into Durango, Colo., being opened on the 15th and the Farmington, N. Mex., branch on the 21st. The Rio Grande Southern is still closed by the washouts.

TEMPERATURE.

The mean of the 135 stations reporting was 40.4°, or 3.7° below the normal. The mean for November, 1910, was 47.4°. By subdivisions the means and departures were: Western Wyoming, 22.3°, −7.1°; western Colorado, 28.2°, −4.2°; eastern Utah, 34.0°, −4.1°; western New Mexico, 39.4°, −3.6°; Arizona, 49.8°, −3.2°; and southeastern Nevada, 44.8°. The highest monthly mean was 63° at Mohawk Summit, Ariz., and the lowest 10.3° at Corona, Colo. The first decade was warmer than the normal in Arizona, while in the central and northern parts of the district days with temperatures below the normal predominated. The remainder of the month was cold, except the 20th and 21st, the deficiencies being marked on the 11th–13th and the last four days in the central and northern parts of the area. The highest temperature, 92°, occurred at Douglas, Ariz., on the 14th, and 90° was reached at three other points in Arizona. The lowest temperature, −33°, occurred at Fraser, Colo., on the 29th. By subdivisions the extremes were: Western Wyoming, 52° at Battle Mountain and −22° at Daniel; western Colorado, 63° at Delta and −33° at Fraser; eastern Utah, 72° at St. George and −20° at Scofield; western New Mexico, 73° at Lordsburg and −5° at Dulce; Arizona, 92° at Douglas and −5° at Flagstaff No. 2; southeastern Nevada, 76° at Logan and 5° at Caliente.

PRECIPITATION.

The average for the 176 stations reporting was 0.49 inch, or 0.54 inch below the normal. The average for November, 1910, was 1.32 inches. A deficiency was noted on all drainage areas but the Grand. By watersheds the means and departures were: Green, 0.64, −0.17; Grand, 1.34, +0.04; San Juan, 1.14, −0.20; Little Colorado, 0.10, −1.00; Gila, 0.05, −0.83; Mimbres, trace, −0.52; and Colorado proper, 0.06, −0.62 inch. By subdivisions the greatest and least monthly amounts were: Western Wyoming, 1.30 at Daniel and 0.34 at Battle Mountain; western Colorado, 5.55 at Corona and 0.25 at Rifle; eastern Utah, 0.93 at Scofield and none at 2 stations; western New Mexico, 0.42 at Blackrock and none at 9 stations; Arizona, 0.56 at Douglas and none at 44 stations. No precipitation occurred at the stations in southeastern Nevada. Precipitation occurred at some point in Colorado every day except the last two; it was widely distributed from the 5th to 11th and on the 16th and 26th. In the remainder of the district, where precipitation was less frequent, it occurred principally in the first half of the month. Snow fell at a few points in eastern Utah and western New Mexico; it was also reported from all stations in Wyoming and Colorado. In Colorado 16 stations reported monthly amounts exceeding 25 inches, with the maximum fall, 50 inches, at Gladstone in the San Juan Mountains. At the close of the month the average depth on the San Juan and Dolores watersheds was 4.2 inches, average altitude 8,100 feet; Gunnison watershed, 12.6 for 8,900 feet; Grand, 12.9 for 8,700 feet; and Yampa and White, 12.6 inches for 8,100 feet average altitude. In general the snow is not yet hard packed.

The average number of days with 0.01 inch or more precipitation was 5 in western Wyoming; 7 in western Colorado; 1 in eastern Utah; 1 in western New Mexico; and no days in Arizona and southeastern Nevada. For the district as a whole the average was 3 days.

MISCELLANEOUS.

The amount of sunshine reported was as follows: Grand Junction 71 per cent of the possible, Durango 73, Flagstaff 87, Phoenix 89, and Yuma 92 per cent.

The relative humidity was in excess of the average in the northern part of the district. The following values were reported: Grand Junction 64, Durango 64, Flagstaff 58, Phoenix 46, and Yuma 40 per cent.

TABLE 1.—*Climatological data for November, 1911. District No. 9, Colorado Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Battle Mountain	Carbon	7,300	....	26.8	.....	52	20	— 15	28	40[a]	0.34	.....	0.24	5.5	2	12	7	10	sw.	U. S. Forest Service.
Daniel	Uinta	6,740	12	19.6	— 7.1	48	19†	— 22	12	44	1.30	+ 0.74	0.30	13.0	7	13	10	7	nw.	J. M. Vandervort.
Eden	Sweetwater	6,577	2	22.7	.....	49	20	— 19	8	48	0.21	.....	0.15	2.5	2	11	10	9	w.	Eden Valley L. & I. Co.
Green River	....do	6,083	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. H. Maxom.
Pinedale	Fremont	7,167	5	20.4	.....	43	3	— 17	28	39[b]	0.57	.....	0.23	10.5	6	14	7	7	nw.	U. S. Forest Service.
Willow Creek Cabin	....do	7,500	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Colorado.																				
Ashcroft	Pitkin	9,483	9	20.1	.....	51	20	— 20	28	51	1.59	.....	0.40	27.0	11	.....	.....	.....	.....	Dan McArthur.
Breckenridge	Summit	9,536	22	17.5	— 8.9	45	15	— 26	28†	51	0.80	— 0.86	0.25	10.0	5	7	11	12	nw.	Mrs. J. G. Thompson.
Buford	Rio Blanca	.....	....	.....	.....	.....	.....	.....	.....	.....	2.23	.....	0.55	27.0	6	17	3	10	w.	Mrs. H. Genier.
Cascade	San Juan	8,900	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	San Juan W. & P. Co.
Cedaredge	Delta	6,175	13	33.4	— 5.3	58	15	— 1	28	50	0.28	— 0.31	0.10	3.0	3	17	11	2	.....	Harry A. Cobbett.
Chromo	Archuleta	7,500	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Lawrence Nolan.
Cochetopa	Saguache	9,088	2	.....	.....	.....	.....	.....	.....	.....	0.46	.....	0.20	13.3	5	10	9	11	sw.	Miss Bessie McDonough.
Collbran	Mesa	6,000	18	31.4	+ 5.2	54	1	— 4	12	37	1.11	+ 0.12	0.39	11.0	8	15	9	6	sw.	A. A. Wood.
Columbine	Routt	8,766	1	.....	.....	.....	.....	.....	.....	.....	1.17	.....	0.20	39.0	11	9	10	11	sw.	Mrs. M. A. Caron.
Columbine Ranch	Delta	6,925	1	.....	.....	.....	.....	.....	.....	.....	1.53	.....	0.52	14.2	8	14	4	12	s.	Geo. W. Wade.
Corona	Grand	11,660	4	10.3	.....	30	20	— 16	12†	37	5.55	.....	0.58	.....	16	.....	.....	.....	w.	U. S. Weather Bureau.
Craig	Moffat	.....	....	27.6[c]	.....	55[c]	4†	— 8[c]	11†	42[c]	0.63	.....	0.53	2.0	2	.....	.....	.....	.....	Joseph F. Haubrich.
Crawford (near)	Montrose	6,600	1	30.2	.....	51	15	— 8	12	34	1.06	.....	0.33	9.0	8	19	6	5	.....	C. W. Roe.
Crested Butte	Gunnison	8,867	1	17.2	.....	50	21	— 22	29	56	2.60	.....	0.85	29.0	5	15	9	6	.....	Charles L. Ross.
De Beque	Mesa	4,935	1	34.2	.....	60	1†	— 2	29	39	0.29	.....	0.12	1.7	3	17	6	7	w.	O. L. Fairley.
Delta	Delta	4,965	21	34.2	— 3.2	63	6†	— 1	28	47	0.30	— 0.23	0.18	0.5	3	16	8	6	.....	E. M. Getts
Dillon	Summit	8,800	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Harry T. Hamilton.
Durango	La Plata	6,534	16	34.0	— 3.2	57	20	3	29	34	0.94	— 0.20	0.47	1.3	8	14	10	6	nw.	U. S. Weather Bureau.
Eureka	San Juan	10,000	4	.....	.....	.....	.....	.....	.....	.....	2.83	.....	0.83	31.0	12	13	7	10	.....	San Juan W. & P. Co.
Fraser	Grand	8,560	2	15.7	.....	46	20	— 33	29	64	2.05	.....	0.40	22.0	11	2	5	23	w.	L. D. C. Gaskill.
Fruita	Mesa	4,510	12	34.2	— 3.4	60	6†	2	29	37	0.36	— 0.27	0.17	1.5	3	18	8	4	.....	J. B. Willsea.
Glade Park ‡	....do	7,000	....	.....	.....	.....	.....	.....	.....	.....	0.96	.....	0.46	12.0	4	13	10	7	sw.	A. F. Terrill.
Gladstone	San Juan	10,400	4	.....	.....	.....	.....	.....	.....	.....	3.34	.....	0.70	50.0	12	9	10	11	ne.	San Juan W. & P. Co.
Glenwood Springs (near)	Garfield	5,823	13	32.6	— 1.8	58	6†	— 9	28	47	0.83	— 0.14	0.20	.....	8	7	14	9	w.	E. A. O'Neil.
Grand Junction	Mesa	4,608	20	36.2	— 3.7	60	10	10	28	30	0.60	+ 0.05	0.36	3.2	4	16	9	5	se.	U. S. Weather Bureau.
Grandlake	Grand	8,153	3	.....	.....	.....	.....	.....	.....	.....	0.40	.....	0.20	8.5	2	18	7	5	w.	Mrs. Belle Kauffman.
Grand Valley	Garfield	5,089	19	35.4	— 2.2	62	1†	— 3	29	42	2.37	+ 1.44	1.95	3.5	8	9	12	9	.....	David Evans.
Gunnison	Gunnison	7,670	18	.....	.....	.....	.....	— 21	28	....	0.69	+ 0.06	0.22	10.1	8	16	9	5	.....	Clarence Adams.
Hesperus	La Plata	8,113	....	.....	.....	.....	.....	.....	.....	.....	0.58	.....	0.22	6.3	4	17	7	6	.....	G. F. Snyder.
Horsefly	Montrose	8,700	1	.....	.....	.....	.....	.....	.....	.....	1.81	.....	0.53	30.0	7	14	8	8	sw	Lawrence J. Finch.
Ironton	Ouray	10,000	1	.....	.....	.....	.....	.....	.....	.....	3.53	.....	0.60	43.6	12	12	5	13	se.	P. H. Foley.
Ladore	Moffat	.....	....	.....	.....	.....	.....	.....	.....	.....	0.37	.....	0.27	4.0	2	17	8	5	.....	Mrs. Geo. C. Bassett.
Lake City	Hinsdale	8,686	6	23.4	.....	51	19	— 16	12†	42	1.37	.....	0.35	20.5	9	15	6	9	s.	J. F. Maurer.
Lay	Moffat	6,190	17	26.2	— 4.8	56	3†	— 17	12	47	1.01	+ 0.22	0.53	10.5	7	13	4	13	sw.	A. G. Wallihan.
Mancos	Montezuma	6,960	12	32.0	— 5.5	56	20	— 4	28	37	1.05	— 0.29	0.48	3.0	5	18	8	4	nw.	B. M. Krumpanitzky.
Marble	Gunnison	7,951	2	26.2	.....	53	15	— 19	28	51	2.15	.....	0.47	25.0	8	19	4	7	ne.	F. E. Morse.
Marshall Pass	Saguache	10,846	8	.....	.....	.....	.....	.....	.....	.....	1.16	.....	0.40	28.0	6	18	1	11	.....	Wm. L. Williams.
Meeker (near)	Rio Blanca	6,182	19	27.4	— 5.7	55	7	— 18	29	43	1.38	+ 0.37	0.49	15.0	6	11	12	7	.....	T. Baker.
Montrose	Montrose	5,811	22	34.9	— 1.1	59	6†	1	12†	36	0.46	— 0.09	0.16	2.0	4	17	9	4	.....	U. S. Reclamation Service.
Nast	Pitkin	7,953	1	21.1	.....	49	20	— 20	28	52	1.64	.....	0.44	21.0	7	14	6	10	w.	Arthur Hanthorn.
Pagoda	Routt	6,500	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. J. W. Scott.
Pagosa Springs	Archuleta	7,108	4	31.8[b]	.....	58[b]	20	— 1[b]	12	45[b]	.....	.....	.....	.....	.....	10[b]	5[b]	7[b]	.....	E. T. Walker.
Palisades	Mesa	4,729	....	37.8	.....	60	6	10	12†	36	0.55	.....	0.18	1.3	5	21	3	6	sw.	G. S. Herbolsheimer.
Paonia	Delta	5,694	16	35.2	— 5.1	60	15	— 5	28	34	1.00	+ 0.22	0.30	5.0	7	13	12	5	sw.	J. M. Underwood.
Parshall	Grand	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. A. Field.
Pitkin	Gunnison	9,500	2	.....	.....	.....	.....	.....	.....	.....	0.81	.....	0.27	12.5	6	20	3	7	s.	Mrs. Maggie Cammann.
Pyramid	Rio Blanca	.....	....	26.8[c]	.....	48[i]	4	— 15	27	34[i]	1.95	.....	0.67	27.5	5	10	8	12	w.	E. E. Egry.
Rangely	....do	5,050	12	32.1	— 1.5	70	3	1	14†	44	0.56	— 0.11	0.50	6.0	2	15	0	15	n.	J. H. McGuire.
Redcliff	Eagle	8,695	18	.....	.....	.....	.....	.....	.....	.....	2.37	+ 1.09	1.20	27.9	6	13	7	10	.....	Dorothea Greiner.
Rico	Dolores	8,824	9	.....	.....	.....	.....	.....	.....	.....	1.54	.....	0.37	16.0	9	15	9	6	s.	Clinton B. Smith.
Rifle	Garfield	5,437	....	32.5	.....	59	1	— 3	29	44	0.25	.....	0.09	1.5	4	19	2	9	sw.	Herman Eiche.
River Portal	Montrose	6,570	5	28.0	.....	56	1	— 9	28	41	1.22	.....	0.27	11.2	10	16	3	11	.....	U. S. Reclamation Service.
Sapinero (near)	Gunnison	8,125	8	23.4	.....	50	10	— 14	29	36	2.61	.....	0.60	29.2	10	16	5	9	w.	W. F. Irving.
Shoshone	Garfield	6,110	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Central Colo. Pow. Co.
Silverton (near)	San Juan	9,400	4	23.2	.....	59	1	— 18	28	61	2.59	.....	0.54	36.5	10	9	7	14	sw.	San Juan W. & P. Co.
Spruce Lodge	Grand	9,600	3	.....	.....	.....	.....	.....	.....	.....	2.84	.....	0.54	43.0	13	.....	.....	.....	.....	H. J. Wills.
Steamboat Springs	Routt	6,683	8	23.2	.....	52	4	— 25	29	45	1.93	.....	0.50	16.5	9	17	2	11	.....	M. Elliott Houston.
Tacoma	La Plata	7,300	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	San Juan W. & P. Co.
Telluride	San Miguel	8,756	....	25.1	.....	55	15	— 16	28	52	3.38	.....	0.72	38.0	10	19	3	8	w.	Wm. T. March.
Terminal Dam	La Plata	8,300	4	.....	.....	.....	.....	.....	.....	.....	0.86	.....	0.18	10.2	7	15	9	6	n.	San Juan W. & P. Co.
Uncompahgre Plateau	Montrose	8,400	1	.....	.....	.....	.....	.....	.....	.....	1.35	.....	0.95	20.0	5	14	15	1	sw.	Martin Esser.
Yampa (near)	Routt	8,000	2	.....	.....	.....	.....	.....	.....	.....	0.61	.....	0.24	4.1	7	12	11	7	n.	Percy A. Hughes.
Utah.																				
Aneth	San Juan	4,800	8	39.5	.....	63	10	10	29	33	0.12	.....	0.09	0	2	22	5	3	w.	H. R. Antes.
Bluff	....do	.....	0	39.0	.....	62	6†	10	29†	32	0	.....	0	0	0	17	13	0	sw.	R. N. Gerry.
Castle Dale	Emery	5,500	12	32.8	— 4.8	68	1	8	11	46	0.10	— 0.87	0.10	.....	1	15	15	0	.....	James Jeffs.
Cisco	Grand	4,447	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John J. Anderson.
Desert Lake	Emery	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dragon	Uinta	.....	....	31.0	.....	59	6	— 5	12	35	0.53	.....	0.40	5.0	2	14	7	9	n.	Gilson Asphaltum Co.
Duchesne	Wasatch	.....	5	29.5	.....	53	6	— 5	29	38	0.16	.....	0.15	1.5	2	14	13	3	w.	M. M. Smith.
Elkhorn	Uinta	6,657	1	.....	.....	.....	.....	.....	.....	.....	0.10	.....	0.10	1.0	1	14	12	4	sw.	Forest Supervisor.
Emery	Emery	6,200	10	29.9	— 8.0	61	24	5	29	49	T.	— 0.44	T.	T.	0	21	0	9	n.	H. C. Wickman.
Escalante	Garfield	5,700	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. H. Barney.
Fort Duchesne	Uinta	5,700	21	32.8	— 0.9	58	7	— 4	28	54	0	— 0.38	0	0	0	25	3	2	w.	W. H. Allen.
Fruitland	Wasatch	7,625	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. Peter Naab.
Green River	Emery	4,080	10	35.8	— 4.1	67	5	1	29	43	T.	— 0.57	T.	T.	0	21	9	0	.....	Edgar E. Adams.
Hanksville	Wayne	4,200	1	35.4	.....	62	6	— 2	29	48	0.39	.....	0.39	0	1	24	5	1	sw.	F. J. Weber.
Hite	Garfield	3,000	10	44.3	— 3.4	69	6	19	29	34	0.15	— 0.70	0.15	T.	1	19	9	2	.....	John P. Hite.
Kanab	Kane	4,925	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Vermillion Arid Farming Association.
La Sal	San Juan	7,000	10	29.2[c]	.....	53	7†	— 1	12	32	0.05	.....	0.05	T.	1	12[c]	7[c]	5[c]	.....	Gertrude W. Carpenter.
Loa	Wayne	7,000	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. S. McClellan.
Manila	Uinta	6,225	1	29.4	.....	52	19†	— 10	11	54	0.12	.....	0.11	3.5	2	5	16	9	.....	Daniel M. Nelson.

TABLE 1.—*Climatological data for November, 1911. District No. 9*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Utah—Continued.																				
Moab	Grand	4,000	22	38.4	− 2.8	66	6	9	29	38	0.21	− 0.49	0.21	1.0	1	11	14	5	.....	Henry Crouse.
Monticello	San Juan	7,545	2	32.0	.....	52	1†	− 2	12	37	0.10	.....	0.10	0	1	16	3	11	nw.	Geo. F. Barton.
New Harmony	Washington										0.10	.....	0.10	.....	1				.....	Geo. F. Prince.
Orderville	Kane	6,660	1								0.19	.....	0.16	0	2				.....	F. A. Porter.
Pine Valley	Washington	6,000																	.....	Mason Gardner.
Price	Carbon	5,557	....	34.6	.....	62	4	3	28†	40	0.01	.....	0.01	0.1	1	23	3	4	se.	R. H. Thompson.
Ranch	Kane	6,700	9	34.4	.....	60	3	1	12	43	0.10	.....	0.10	.....	1	22	4	4	n.	J. W. Seaman.
San Rafael	Emery																		.....	W. C. Foy.
St. George	Washington	2,880	21	43.4	− 4.0	72	20	6	29	50	0.02	− 0.49	0.02	0	1	21	5	4	.....	A. B. Ballantyne.
Scofield	Carbon	7,625	1	23.5	.....	55	1	− 20	28	52	0.93	.....	0.22	16.5	5	17	1	12	s.	B. Newren.
Springdale	Washington	3,500	3																.....	Hattie Wood.
Sunnyside	Carbon	5,280	6								0.35	.....	0.30	3.5	2				.....	H. Cullum.
Teasdale	Wayne	7,000	3	33.3	.....	60	30	− 1	28†	47	0.11	.....	0.07	.....	2	18	0	12	.....	Josiah Shurtz.
Thompsons	Grand	5,150	....	36.8	.....	60	6	7	29	33	0.15	.....	0.15	T.	1	12	17	1	sw.	A. M. Starmont.
Tropic	Garfield	7,000	13																.....	E. P. Bolton.
Troutcreek Ranger	Uinta	9,200	1																.....	Forest Supervisor.
Vernal	....do	5,050	15	30.4	− 4.5	57	6	− 1	28	36	0.02	− 0.72	0.01	1.2	2	21	4	5	.....	S. P. Trim.
Woodside	Emery	4,645	....	33.6	.....	66	3	0	29	40	0.14	.....	0.14	3.0	1	17	1	12	n.	D. P. Adams.
New Mexico.																				
Alma	Socorro	5,500	15	42.6	− 3.4	70	10	4	29	54	0	− 1.15	0	0	0	20	9	1	s.	Max A. Balke.
Aragon	....do	5,856	4	39.2	.....	67	19	5	29†	55	0	.....	0	0	0	19	9	2	n.	J. R. Milligan.
Aztec	San Juan	5,590	12								0.21	− 0.25	0.13	T.	2	13	15	2	sw.	Dr. T. J. West.
Berger's Ranch	McKinley	8,000	....	35.5	.....	60	19†	2	27	38	0.17	.....	0.05	4.5	5	15	15	0	w.	Herman Berger.
Blackrock	....do	6,500	3	36.3	.....	68	22	1	27	49	0.42	.....	0.21	1.5	3	22	0	8	w.	D. Blackwater.
Bloomfield	San Juan	5,500	16	35.9[c]	− 3.3	64*	10	2[c]	30	44*	0.41	− 0.12	0.14	1.5	4	14	14	2	sw.	Fred Le Clerc.
Cambray	Luna	4,215	12								T.	− 0.56	T.	T.	0	20	4	6	w.	Agent Southern Pacific R. R.
Columbus	....do	4,054	2			71	10	7	29	....	0.21	.....	0.21	0	1	23	2	5	sw.	Agent E. P. & S. W. R. R.
Deming	....do	4,333	34	45.2	.....	72	1†	6	29	48	0.00	− 0.52	0.00	0	0	28	2	0	w.	Agent Southern Pacific R. R.
Dulce	Rio Arriba	6,756	4	30.2	− 3.0	58	20	− 5	28	44	0.39	− 0.25	0.26	2.0	4	17	3	10	sw.	G. H. Blakeslee.
Fort Bayard	Grant	6,152	36	41.6	− 4.8	64	15†	7	29	40	T.	− 0.67	T.	T.	0	30	0	0	ne.	U. S. General Hospital.
Fruitland	San Juan	4,800	18	37.4	− 1.9	63	10	8	28†	34	0.25	− 0.08	0.25	T.	1	19	8	3	sw.	C. J. Collyer.
Gage	Luna	4,486	4	44.2	.....	71	22	8	29†	48	0.00	− 0.35	0.00	0	0	26	4	0	w.	Agent Southern Pacific R. R.
Gila Planting Station	Grant	6,475	1	42.2	.....	65	19†	7	29	39	T.	.....	T.	T.	0	21	7	2	nw.	U. S. Forest Service.
Hachita	....do	4,504	2			71	10	15	29	....	0.19	.....	0.12	0	2	23	6	1	se.	Agent E. P. & S. W. R. R.
Haynes	Rio Arriba	6,600	1																.....	Dr. John R. Haynes.
Hermanes	Luna	4,451	2			70	10†	9	29	....	0.40	.....	0.40	0	1	23	2	5	w.	Agent E. P. & S. W. R. R.
Lordsburg	Grant	4,245	11	45.2	− 5.4	73	10†	9	30	50	0.00	− 0.50	0.00	0	0	24	4	2	e.	Agent Southern Pacific R. R.
Luna	Socorro	7,300	6	35.2	.....	60	20	− 3	29	51	0.00	.....	0.00	0	0	19	11	0	w.	Charles B. Martin.
Mimbres	Grant	5,007	6								0.00	.....	0.00	0	0	24	6	0	nw.	Charles Dennis.
Pinos Altos (near)	Grant	7,253	....					1	29	....	0.08	.....	0.08	0	1	18	9	3	nw.	O. L. Scott.
Pratt	....do	4,415	2								0.18	.....	0.18	0	1	13	13	4	w.	Agent E. P. & S. W. R. R.
Redrock	....do	4,150	6								0.00	.....	0.00	0	0	27	3	0	.....	Robert H. Woods.
Rodeo	....do	4,118	2								0.00	.....	0.00	0	0	27	3	0	.....	Agent E. P. & S. W. R. R.
Silver City	....do	5,869	..	41.5	.....	64	20	5	29	40	T.	.....	T.	T.	0	20	9	1	.....	E. M. Brumback.
Arizona.																				
Allaires Ranch	Cochise	4,184	15								0.01	− 0.82	0.01	0	1	26	0	4	w.	Thos. Allaire.
Alpine	Apache	8,500																	.....	U. S. Forest Service.
Aztec	Yuma	492	13	61.1	− 2.4	83	4	31	29	43	0	− 0.86	0	0	0	27	1	2	n.	Agt. So. Pac. Co.
Benson	Cochise	3,523	32	50.4	− 4.8	78	3†	24	24†	46	0.10	− 0.24	0.10	0	1	20	0	10	w.	Do.
Bisbee	....do	5,500	22	48.6	− 3.5	68	13	22	28	32	0.10	− 0.57	0.10	0	1	19	7	4	e.	Rev. J. G. Pritchard.
Bowie	....do	3,756	36	50.7	− 1.9	79	5	16	30	44	0	− 0.64	0	0	0	18	11	1	sw.	Agt. So. Pac. Co.
Buckeye	Maricopa	980																	.....	H. E. Kell.
Canille	Santa Cruz	5,225	2								0.15	.....	0.15	0	1	22	6	2	sw.	R. A. Rodgers.
Casa Grande	Pinal	1,396	29			83	7				0	− 0.55	0	0	0				nw.	Agt. So. Pac. Co.
Casa Grande Ruins	....do	1,422	3	56.7	.....	84	20	25	27	52	0	.....	0	0	•0	22	6	2	w.	F. Pinkley.
Cavecreek	Maricopa	1,520	3	54.8	.....	80	20	20	29	48	0	.....	0	0	0	21	9	0	.....	E. A. Howard.
Chin Lee	Apache	6,090	3	36.0	.....	63	7†	0	28†	47	0.05	.....	0.03	T.	2	4	11	15	n.	Fr. L. Ostermann, O. F. M.
Chlarsons Mill	Graham	8,000	6																.....	H. R. Chlarson.
Clifton	Greenlee	3,584	20	51.8	.....	73	1	23	29†	50	0	− 0.59	0	0	0	29	1	0	.....	P. Reisinger.
Cline	Gila	2,300	12																.....	W. M. Clanton.
Cochise	Cochise	4,219	13	47.4	− 4.7	76	17	16	29	53	0	− 0.72	0	0	0	30	0	0	e.	Agt. So. Pac. Co.
Columbia	Yavapai	1,900	11	59.2	− 1.5	80	1†	31	29	38	0	− 1.48	0	0	0	26	1	3	se.	M. J. Nolan.
Courtland	Cochise	4,543	2																.....	Agt. E. P. & S. W. Co.
Dos Cabezos	....do	5,250	3	44.1	.....	66	6†	17	30	42	0	.....	0	0	0	27	1	2	e.	N. Erickson.
Douglas	....do	3,930	8	53.7	.....	92	14	14	30	56	0.56	.....	0.56	0	1	26	2	2	sw.	Dr. F. T. Wright.
Dudleyville	Pinal	2,204	21	51.8	− 3.9	77	1	25	25†	48	0.02	− 0.95	0.01	0	2	21	6	3	se.	G. F. Cook.
Fairbank	Cochise	3,862	1																.....	Agt. E. P. & S. W. Co.
Flagstaff	Coconino	6,907	19	34.1	− 0.5	62	20	6	29	45	0.20	− 1.20	0.20	T.	1	24	2	4	e.	U. S. Weather Bureau.
Flagstaff (1)	....do	7,452	4																.....	C. C. Moers.
Flagstaff (2)	....do	7,500	3	32.4	.....	61	20	− 5	29	52	0.18	.....	0.18	T.	1	23	6	1	sw.	U. S. Forest Service.
Florence	Pinal	1,504	11																.....	Agt. Ariz. Eastern R. R. Co.
Fort Apache	Navajo	5,200	40					8	25	....	0.03	− 1.11	0.03	0	1	25	4	1	sw.	Post Surgeon, U. S. A.
Fort Huachuca	Cochise	5,100	26	44.0	− 8.6	72	18	10	27	46[a]	0	− 0.96	0	0	0	30	0	0	se.	Do.
Gilabend	Maricopa	737	21	61.0	+ 2.0	90	25	28	19	56	0	− 0.43	0	0	0	30	0	0	.....	Agt. So. Pac. Co.
Globe	Gila	3,525	10	50.6	.....	73	1	26	29	37	0.05	− 1.31	0.05	0	1	20	10	0	se.	B. G. Fox, M. D.
Grand Canyon	Coconino	6,866	8	29.4	.....	55	3	10	28	31	T.	.....	T.	T.	0	27	1	2	sw.	Agt. G. C. R. R. Co.
Grand Canyon (1)	....do	3,676																	.....	C. C. Spaulding.
Granite Reef Dam	Maricopa	1,372	20	58.4	− 3.8	78	1	28	29	37	0	− 0.73	0	0	0	25	5	0	e.	U. S. Recl. Service.
Greer	Apache	9,200																	.....	U. S. Forest Service.
Hereford	Cochise	4,180	1	45.7	.....	70	1	12	28†	39	0.08	.....	0.08	0	1	28	0	2	sw.	Agt. E. P. & S. W. Co.
Holbrook	Navajo	5,069	21																.....	T. Larson.
Indian Oasis	Pima	3,000	1								0	.....	0	0	0	23	0	7	se.	J. Menager.
Intake	Gila	2,230	6																.....	U. S. Recl. Service.
Jerome	Yavapai	4,743	14	50.3	− 1.5	67	6	23	28	41	0	− 1.54	0	0	0	25	5	0	sw.	Dr. L. A. Hawkins.
Keams Canyon	Navajo	6,600	7	37.0	.....	62	15	4	29	40	0.05	.....	0.05	T.	1	18	9	3	nw.	D. E. Livesay.
Kingman	Mohave	3,326	10	50.9	− 2.2	76	6	22	28	39	0	− 0.78	0	0	0	18	9	3	sw.	E. L. Yule.
Lakeside	Navajo	6,500	13	37.2	.....	63	2	6	29	41	T.	− 1.16	T.	0	0	21	0	9	ne.	Prof. J. Peterson.
Lewis Springs	Cochise	4,029	2	52.4	.....	90	14	10	24†	65	0	.....	0	0	0	28	1	1	.....	Agt. E. P. & S. W. Co.
Maricopa	Pinal	1,186	35	57.0	+ 0.4	90	2	22	28	52	0	− 0.61	0	0	0	30	0	0	.....	Agt. So. Pac. Co.
McNeal	Cochise	4,490	1								0.07	.....	0.07	0	1	27	3	0	w.	C. E. Bolton.
Mesa	Maricopa	1,244	17	57.4	− 1.5	80	20	30	26†	42	0	− 0.87	0	0	0	24	4	2	ne.	C. L. Diehl.

TABLE 1.—*Climatological data for November, 1911. District No. 9*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Arizona—Continued.																				
Mohawk Summit	Yuma	538	12	63.0	− 3.5	82	10	50	19†	26	0	− 0.25	0	0	0	21	0	9	e.	Agt. So. Pac. Co.
Naco	Cochise	4,579	1	48.2	.....	74	3	22	29	39	0.20	.....	0.20	0	1	26	0	4	e.	Agt. E. P. & S. W. Co.
Natural Bridge	Gila	4,990	22	.....	.....	.....	.....	.....	.....	.....	0	− 1.93	0	0	0	22	5	3	sw.	D. G. Goodfellow.
Oracle	Pinal	4,500	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Winters.
Osborn	Cochise	4,676	2	54.2	.....	76	1	25	30	32	0.20	.....	0.20	0	1	29	0	1	.....	Agt. E. P. & S. W. Co.
Paradise	.....do	5,436	5	44.8	.....	72	20	8	28	49	0	.....	0	0	0	20	9	1	s.w.	J. C. Hancock.
Parker	Yuma	345	14	55.1	− 5.1	84	1†	18	30	53	0	− 0.58	0	0	0	30	0	0	.....	M. A. Israel, M. D.
Payson	Gila	5,550	3	46.3	.....	76	19†	9	29	65	0	.....	0	0	0	21	0	9	sw.	M. McDonald.
Phoenix	Maricopa	1,108	30	57.6	− 1.1	80	20	30	30	40	T.	− 0.06	T.	0	0	24	4	2	e.	U. S. Weather Bureau.
Phoenix (1)	.....do	1,092	21	56.1	− 0.9	82	19	24	30	49	T.	− 0.81	T.	0	0	22	6	2	e.	G. Acuff.
Phoenix (2)	.....do	1,189	3	58.5	.....	82	19	28[c]	30	43[c]	0	.....	0	0	0	28	1	1	sw.	Horne & Armstrong.
Pinal Ranch	Pinal	4,520	17	.....	.....	.....	.....	.....	.....	.....	0.11	.....	0.11	0	1	29	0	1	.....	Irion & Craig.
Pinto	Apache	5,660	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. C. F. Henning.
Prescott	Yavapai	5,320	44	40.8	− 2.0	69	20	6	29	50	0	− 1.10	0	0	0	21	6	3	.....	J. W. Flinn, M. D.
Quartzsite	Yuma	800	4	55.2	.....	83	7	17	29	47	0	.....	0	0	0	.....	.....	.....	n.	W. E. Scott
Redrock	Pinal	1,864	4	58.0	.....	80	1†	28	29	41[a]	.....	.....	.....	0	.....	23[a]	6[a]	0[a]	w.	W. J. Crowell.
Roosevelt	Gila	2,175	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Recl. Service.
Sacaton	Pinal	1,280	4	55.6	.....	87	20	19	28	58	0	.....	0	0	0	.....	.....	.....	.....	E. W. Hudson.
St. Johns	Apache	5,650	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. Shreeve.
St. Michaels	.....do	6,950	24	36.7	+ 0.9	73	5	2	29†	50	T.	− 0.97	T.	T.	0	15	15	0	sw.	Rev. A. Weber, O. F. M.
Salome	Yuma	1,875	4	53.0	.....	80	3†	16	29†	50	0	.....	0	0	0	20	8	2	ne.	Mrs. M. B. Swartz.
San Carlos	Gila	2,456	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. S. Thomas.
San Simon	Cochise	3,609	24	55.2	+ 0.2	88	2†	12	30	52	0	− 0.34	0	0	0	24	4	2	.....	Agt. So. Pac. Co.
Seligman	Yavapai	5,219	5	47.4	.....	74	2	28	21	38	0	.....	0	0	0	26	0	4	sw.	Lib. A., T. & S. F. R. R. Co
Sentinel	Maricopa	685	13	60.0	− 2.9	79	2†	32	30	40	0	− 0.42	0	0	0	27	3	0	.....	Agt. So. Pac. Co.
Silverbell	Pima	2,650	6	59.6	.....	83	21	35	27†	38	0	.....	0	0	0	26	0	4	sw.	Imperial Copper Co.
Snowflake	Navajo	5,644	5	37.6	.....	64	16	3	29	48	0	.....	0	0	0	24	4	2	n.	W. J. Flake.
Springerville	Apache	6,862	1	35.3[c]	.....	65[c]	15	− 3[c]	26	57[c]	0	.....	0	0	0	26[b]	0[b]	2[b]	s.	U. S. Forest Service.
Supai	Coconino	3,200	6	50.0	.....	73	6	24	29	35	0	.....	0	0	0	.....	.....	.....	.....	O. C. Upchurch.
Tempe	Maricopa	1,165	7	55.3	.....	78	1†	25	30	44	0	.....	0	0	0	20	8	2	sw.	F. H. Simmons.
Thatcher	Graham	2,800	9	50.0	.....	77[a]	1	17[a]	27†	53[a]	T.	.....	T.	0	0	20	10	0	se.	Prof. J. H. Larson.
Tombstone	Cochise	4,550	16	50.8	− 3.6	73	15	21	28†	36	0	− 0.61	0	0	0	26	3	1	.....	F. N. Walcott.
Truxton	Mohave	3,997	2	46.8	.....	73	19†	17	29	46	0	.....	0	0	0	23	4	3	n.	G. A. Dennis.
Tuba	Coconino	4,500	11	38.9	− 4.5	64	6	9	30	37	0	− 0.69	0	0	0	19	7	4	sw.	H. P. Marble.
Tucson	Pima	2,390	32	51.0	− 7.3	80[a]	2	24[a]	18	39[a]	T.	− 0.88	T.	0	0	10	20	0	nw.	University of Arizona.
Tucson (1)	.....do	2,380	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. M. Robe.
Tucson (2)	.....do	2,526	1	55.0	.....	82	19	24	27	51	T.	.....	T.	0	0	23	1	6	w.	U. S. C. & G. Sur.
Vail	.....do	3,421	13	54.6	− 7.4	76	1†	22	29	48	0	− 0.81	0	0	0	29	1	0	e.	Agt. So. Pac. Co.
Walnut Grove	Yavapai	3,649	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. O. Carter.
Wickenburg	Maricopa	2,072	13	49.6	− 4.7	80	2	16	23	44	0	− 0.56	0	0	0	17	13	0	w.	Agt. S. F., P. & P. Ry.
Willcox	Cochise	4,164	30	46.3	− 5.8	75	14	18	26	50	0	− 0.48	0	0	0	19	0	11	n.	Agt. So. Pac. Co.
Williams	Coconino	6,750	12	38.1	− 3.4	67	6†	4	29	53	0	− 1.46	0	0	0	22	8	0	.....	E. J. Nordyke.
Winslow	Navajo	4,853	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. F. Bauer.
Yuma	Yuma	141	32	60.6	− 1.3	84	4	35	29	40	0	− 0.32	0	0	0	25	4	1	n.	U. S. Weather Bureau.
Yuma (1)	.....do	150	4	57.7	.....	84	4	25	30	48	0	.....	0	0	0	27	3	0	n.	E. L. Crane.
Nevada.																				
Caliente	Lincoln	4,407	1	38.8	.....	72	5	5	29	48	0.00	.....	0.00	0	0	24	1	5	ne.	Salt Lake Route.
Logan	Clark	1,700	4	50.9	.....	76	6	20	29†	43	0.00	.....	0.00	0	0	23	2	5	n.	R. M. Filcher.

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Formerly Terrill's ranch.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1911. District No. 9, Colorado Valley.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Wyoming.																																
Battle Mountain	Snake			.24						.10		T.															T.					0.34
Daniel	Green				.10	.10			.20	.20	.30			.20	.20							T.					T.					1.30
Eden	do						T.	.06									.15											T.				0.21
Green River	do																															
Pinedale	do				T.	.05	.03		.05	.10	.23			T.	.11																	0.57
Willow Creek Cabin	do																															
Colorado.																																
Ashcroft	Grand					.40			.27	.40	.10	.15			.02		.07	.05	T.				.05				.05	.03				1.59
Breckenridge	do		T.			T.	.15			.23		.25		T.	T.		.07	T.	T.				T.				T.	.10				0.80
Buford	White					.35			.32	T.		.35					.55	.23				T.					.43					2.23
Cascade	San Juan																															
Cedaredge	Gunnison		.10							.08																	.10					0.28
Chromo	San Juan																															
Cochetopa	Gunnison	T.				.10		.20	T.			.10					.04						T.			T.	.02	T.				0.46
Collbran	Grand					.39			.19	.05		.13					.08	.03					.04				.20	T.				1.11
Columbine	Yampa					.11		.07		.09	.08			.07		.03	.11	.18		.12				.20				.11				1.17
Columbine Ranch	Gunnison		.10			.39		.07	.09	.52	.11	.16	T.										T.				.09					1.53
Corona	Grand	.14	.55	.07			.52		.28	.44	.36	.52	.50		.18		T.	.58	.27	.06			.06	.52				.50				5.55
Craig	Yampa					T.										.53							T.				.10					0.63
Crawford (near)	Gunnison		.33			.14			.25	.08		.09					.03						.04				.10					1.06
Crested Butte	do					.40	T.		.55	.85	T.	.65					.15										T.	T.	T.			2.60
De Beque	Grand					.12						.10															.07					0.29
Delta	Gunnison					.08			.18																		.04					0.30
Dillon	Grand																															
Durango	San Juan	.45	.06			.07			.09		.03	.21					.01						T.				.02					0.94
Eureka	do	.09	.09	.10		.18	.17		.64	.83	.10	.17			.11		.17										.18					2.83
Fraser	Grand	.40				.10	.18	.10	.12	.10	.40	.20					.03	T.				T.	.30				.12					2.05
Fruita	do					.15			T.	T.		.17															.04					0.36
Glade Park	do					.24			.18			.46					.08										T.					0.96
Gladstone (near)	San Juan	.02	.22	.14		.70		.48	.40		.07				.16	.51	.20						.04				.40					3.34
Glenwood Springs	Grand					.20	.10	.05	.10	.20	.03	.10					T.										.05					0.83
Grand Junction	do				T.	.17		T.	.07		.03	.33					T.										T.					0.60
Grandlake	do	T.					.20	T.	T.	.20	T.					T.							T.									0.40
Grand Valley	do				1.95				.09	.10	T.	.02	.03				.06										.05	.07				2.37
Gunnison	Gunnison		.22		.12				.17	.05			.07		.04		T.								.01			.01				0.69
Hesperus	La Plata	T.	.22			.15			.04			.17					T.					T.										0.58
Horsefly	Gunnison	.05	.33			.27				.16	.53						.27										.20					1.81
Ironton	do		.28			.41			.60	.38		.46			.08		.18	.30				.07					.41	.32	.04			3.53
Ladore	Yampa				.10					T.	T.	.27					T.								T.	T.						0.37
Lake City	Gunnison	T.	.08			.18			.27	.35		.28			T.		T.	.08					.05				.03	.05				1.37
Lay	Yampa					.11			.04	.01	.20						.53						.02				.10					1.01
Mancos	San Juan	T.	.48			.27			.15			.14					.01										T.					1.05
Marble	Grand					.40			.29	.34	.18	.47					.18						.07				.22					2.15
Marshall Pass	Gunnison		.12				.19		.15			.40	.20	.10																		1.16
Meeker (near)	White					.25			.04		T.	.49					.25						.13				.22					1.38
Montrose	Gunnison		.15			.16			.08			.07					T.										T.					0.46
Nast	Grand																															
Pagoda	Yampa																															
Pagosa Springs	San Juan																															
Palisades	Grand					.18			.11	T.		.13		T.	T.		.01	T.									.12	T.				0.55
Paonia	Gunnison		.08			.18			.19	.07		.30											.08				.10					1.00
Parshall	Grand																															
Pitkin	Gunnison	.17				.06			.10	.27		.11			.10												T.					0.81
Pyramid	Yampa					.40					.67						.53				.15						.20					1.95
Rangely	White																															
Redcliff	Grand	1.20	T.		.02				T.			.50					.18	T.	T.	.38			T.			T.	.09					2.37
Rico	Dolores	.08	.04	.18		.09				.32	.18							.21					.37				.07					1.54
Rifle	Grand					.08						.09					.01										.07					0.25
River Portal	Gunnison		.24			.11			.21	.06		.27					.05	.06					.04				.17	.01				1.22
Sapinero (near)	do		.15			.37	T.		.60	.20		.50	.04		T.		.16						.08				.30	.21				2.61
Shoshone	Grand																															
Silverton (near)	San Juan		.40			.54			.20	.15	.39	.25					.32	.09					T.				.15	.10				2.59
Spruce Lodge	Grand		.28			.08	.22	.28	.28	.15		.54					*	.15					.17	.15			.14	.24				2.84
Steamboat Springs	Yampa					*	.55			.20		.50					*	*	.30				.23				.15					1.93
Tacoma	San Juan																															
Telluride	San Miguel		.35			.67			.45	.33		.72			.25		.22	.12					T.				.24	.03				3.38
Terminal Dam	San Juan			T.		.10			.15		.18	.16	.12			.10	T.						.05				T.					0.86
Uncompahgre Plateau	Gunnison	.20				.07			.95	.07	T.					T.							T.				.06	T.				1.35
Yampa (near)	Yampa					.08	.09		T.	.07	.05	.24					.03					T					T.	.05				0.61
Utah.																																
Aneth	San Juan					.09						.03																				0.12
Bluff	do																															0.00
Castle Dale	Green								T.			.10																				0.10
Cisco	Grand																															
Desert Lake	Green																															
Dragon	do					T.			13			40					T.									T.						0.53
Duchesne	do								T.	.01	T.	.15					T.										T.					0.16
Elkhorn	do										.10																					0.10
Emery	Colorado												T.																			T.
Escalante	do																															
Fisher Valley	Grand																															
Fort Duchesne	Green																															0.00
Fruitland	do																															
Green River	do											T.															T.					T.
Hanksville	Colorado										.39																					0.39
Hite	do											15																				0.15
Kanab	do																															
La Sal	Grand	T.	T.					T.		T.		.05											T.				T.	T.				0.05
Loa	Colorado																															
Manila	Green					.11				.01																						0.12
Moab	Grand								T.			.21																T.				0.21
Monticello	San Juan								.10																							0.10
New Harmony	Colorado										.10																					0.10
Orderville	do	.03										.16																				0.19
Pine Valley	do																															
Price	Green									T.	T.	.01																				0.01
Ranch	Colorado										T.	.10					T.															0.10
San Rafael	Green																															

TABLE 2.—*Daily precipitation for November, 1911. District No. 9*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Utah—Continued.																																
St. George	Colorado										.02																				0.02
Scofield	Green					.22		T.	.03	.21	.20	.10					.09										.08				0.93
Springdale	Colorado																														
Sunnyside	Green											.30						T.								T.		.05			0.35
Teasdale	Colorado								.07			.04																			0.11
Thompsons	Green											.15															T.				0.15
Tropic	Colorado																														
Troutcreek Ranger	Green																														
Vernal	do					T.				.01		.01																			0.02
Woodside	do										.14																T.				0.14
New Mexico.																															
Alma	Gila																														0.00
Aragon	do																														0.00
Aztec	San Juan	T.	.08			.13			T.			T.					T.												T.		0.21
Berger's Ranch	Little Colorado	.04				.02						.04		.05													.02				0.17
Blackrock	do	.11			.21							T.		.10																	0.42
Bloomfield	San Juan	.14				.14			.03			.10																T.		T.		0.41
Cambray	Mimbres						T.																								T.
Columbus	Gila		T.		T.	.21																									0.21
Deming	Mimbres																														0.00
Dulce	San Juan		.26			.11			T.	.01		T.		T.			T.										.01	T.			0.39
Fort Bayard	Mimbres														T.							T.						T.		T.
Fruitland	San Juan	T.				.25						T.																			0.25
Gage	Mimbres																														0.00
Gila Planting Station	do														T.														T.		T.
Hachita	Gila				.07	.12																									0.19
Haynes	San Juan																														
Hermanes	Gila				.40																										0.40
Lordsburg	do																														0.00
Luna	do																														0.00
Mimbres	Mimbres																														0.00
Pinos Altos (near)	Gila													.08																	0.08
Pratt	do				.18																										0.18
Redrock	do																														0.00
Rodeo	do																														0.00
Silver City	Mimbres	T.												T.															T.		T.
Arizona.																															
Allaires Ranch	Sonora													.01																	0.01
Alpine	Gila																														
Aztec	do																														0.00
Benson	San Pedro				10									T.																	0.10
Bisbee	do				.10																										0.10
Bowie	Gila																														0.00
Buckeye	do																														
Canille	San Pedro				.15									T.																	0.15
Casa Grande	Gila																														0.00
Casa Grande Ruins	do																														0.00
Cavecreek	Verde																														0.00
Chin Lee	San Juan		.03									.02																T.			0.05
Chlarsons Mill	Gila																														
Clifton	do																														0.00
Cline	Salt																														
Cochise	Desert																														0.00
Columbia	Agua Fria																														0.00
Courtland	White																														0.00
Dos Cabezos	Desert																														0.00
Douglas	Sonora				.56																										0.56
Dudleyville	Gila				.01									.01																	0.02
Fairbank	San Pedro																														
Flagstaff	L. Colorado	.20									T.			T.																	0.20
Flagstaff (1)	do																														
Flagstaff (2)	do	.18			T.																			T.							0.18
Florence	Gila																														
Fort Apache	Salt				.03																										0.03
Fort Huachuca	San Pedro																														0.00
Gilabend	Gila																														0.00
Globe	Salt					.05																									0.05
Grand Canyon	Colorado	T.										T.	T.																		T.
Grand Canyon (1)	do																														
Granite Reef Dam	Salt																														0.00
Greer	L. Colorado																														
Hereford	Gila				.08																										0.08
Holbrook	L. Colorado																														
Indian Oasis	Desert																														0.00
Intake	Salt																														
Jerome	Verde																														0.00
Keams Canyon	L. Colorado					.05						T.																			0.05
Kingman	Colorado																														0.00
Lakeside	L. Colorado									T.																					T.
Lewis Springs	San Pedro																														0.00
Maricopa	Gila																														0.00
McNeal	Desert				.07																										0.07
Mesa	Salt																														0.00
Mohawk Summit	Gila																														0.00
Naco	San Pedro				.20																										0.20
Natural Bridge	Verde																														0.00
Oracle	San Pedro																														
Osborn	do				.20																										0.20
Paradise	Desert																														0.00
Parker	Colorado																														0.00
Payson	Verde																														0.00
Phoenix	Salt													T.																	T.
Phoenix (1)	do													T.																	T.
Phoenix (2)	do																														0.60
Pinal Ranch	Gila					.11																									0.11
Pinto	L. Colorado																														
Prescott	Hassayampa																														0.00

TABLE 2.—*Daily precipitation for November, 1911. District No. 9*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Arizona—Contd.																																
Quartzsite	Colorado													T.																	0.00
Redrock	Santa Cruz													T.																	T.
Roosevelt	Salt																														
Sacaton	Gila																														0.00
St. Johns	L. Colorado																														
St. Michaels	do	T.				T.								T.																	T.
Salome	Colorado																														0.00
San Carlos	Gila																														
San Simon	do																														0.00
Seligman	Verde																														0.00
Sentinel	Gila																														0.00
Silverbell	Santa Cruz																														0.00
Snowflake	L. Colorado																														0.00
Springerville	do								*																						0.00
Supai	Colorado																														0.00
Tempe	Salt																														0.00
Thatcher	Gila												T.																		T.
Tombstone	San Pedro																														0.00
Truxton	Colorado																														0.00
Tuba	L. Colorado																														0.00
Tucson	Santa Cruz				T.							T.		T.																	T.
Tucson (1)	do																														
Tucson (2)	do													T.																	T.
Vail	do																														0.00
Walnut Grove	Hassayampa																														
Wickenburg	do																														0.00
Willcox	Desert																														0.00
Williams	Colorado																														0.00
Winslow	L. Colorado																														
Yuma	Colorado																														0.00
Yuma (1)	do																														0.00
Nevada.																															
Caliente	Colorado																														0.00
Logan	do																														0.00

* Precipitation included in that of the next measurement.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1911. District No. 9, Colorado Valley.*

Date.	Wyoming.				Colorado.										Utah.										New Mexico.			
	Daniel.		Green River.		Durango.		Grand Junction.		Gunnison.		Meeker.		Steamboat Springs.		Emery.		Fort Duchesne.		Hite.		Moab.		St. George.		Bloomfield.		Fort Bayard.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	37	7	.....	.....	47	30	57	36	54	10	49	16	45	21	50	30	52	26	65	40	60	32	71	33	50	46	62	34
2....	43	2	.....	.....	43	32	56	35	.....	28	46	16	44	21	45	28	51	28	64	37	60	33	71	32	54	30	53	38
3....	40	11	.....	.....	49	25	56	32	.....	19	50	15	48	6	43	27	52	17	63	37	59	31	70	27	58	28	52	32
4....	41	16	.....	.....	50	22	56	28	.....	12	48	18	52	16	45	28	46	18	64	35	61	27	69	26	62	24	50	29
5....	34	10	.....	.....	46	30	47	36	.....	16	44	29	43	26	43	29	55	27	64	41	56	40	71	27	52	29	56	33
6....	32	9	.....	.....	57	25	59	33	.....	24	49	24	42	10	47	28	56	21	69	37	66	47	71	27	55	26	60	34
7....	34	3	.....	.....	51	25	54	34	.....	27	55	20	35	— 2	42	26	58	17	63	36	65	27	64	28	60	24	57	33
8....	29	10	.....	.....	45	34	48	32	.....	29	45	24	37	22	41	23	54	20	65	38	57	33	70	30	54	30	59	32
9....	33	15	.....	.....	53	33	57	34	.....	24	52	35	47	20	45	26	56	27	68	37	64	35	69	31	56	30	60	40
10....	34	15	.....	.....	54	35	60	42	.....	26	48	30	46	29	41	22	55	22	67	53	65	35	70	38	64	28	62	41
11....	20	— 11	.....	.....	45	12	42	15	.....	26	48	10	43	7	40	20	43	15	53	30	31	27	47	31	37	25	55	40
12....	15	— 22	.....	.....	33	6	30	12	.....	— 10	25	— 14	26	—16	31	18	50	4	41	21	34	15	50	17	40	8	58	24
13....	25	15	.....	.....	48	23	38	20	.....	— 10	28	— 2	34	— 4	29	15	47	9	46	29	36	22	60	25	48	18	61	26
14....	34	15	.....	.....	51	26	47	23	.....	18	47	16	40	25	27	11	54	10	60	29	51	22	64	20	49	22	52	35
15....	35	15	.....	.....	53	22	49	23	.....	19	54	19	50	13	26	12	52	14	63	29	55	23	65	21	.....	.....	64	30
16....	31	10	.....	.....	43	23	48	31	.....	6	40	25	41	25	27	17	56	21	56	38	53	36	62	28	.....	.....	59	34
17....	36	8	.....	.....	47	22	43	23	39	9	30	0	35	17	29	19	50	18	54	27	49	23	62	21	.....	.....	53	27
18....	36	15	.....	.....	46	17	48	23	43	7	44	18	47	22	28	18	46	16	57	27	53	23	63	20	60	17	60	24
19....	48	24	.....	.....	51	20	52	27	44	10	50	18	43	29	35	19	53	10	59	29	55	23	67	23	60	18	54	23
20....	48	10	.....	.....	57	25	58	31	47	12	54	20	51	19	40	22	52	15	60	31	56	23	72	22	60	18	64	24
21....	40	3	.....	.....	55	26	50	25	48	13	54	16	47	4	52	20	51	14	62	30	54	23	67	22	61	18	62	32
22....	34	4	.....	.....	50	21	48	26	40	10	41	25	32	9	55	19	51	15	56	34	55	28	66	29	61	17	56	28
23....	35	1	.....	.....	44	19	45	24	43	4	38	4	28	—10	60	11	52	7	55	32	47	22	59	23	.....	.....	50	28
24....	38	3	.....	.....	50	17	47	19	40	5	44	8	35	— 9	61	12	50	12	54	26	48	17	59	14	.....	.....	52	17
25....	44	4	.....	.....	49	17	48	23	39	— 1	46	7	34	—10	56	15	50	9	54	26	48	17	62	16	49	12	57	20
26....	30	3	.....	.....	44	18	35	20	36	— 2	35	15	29	— 5	50	13	48	6	57	25	48	21	66	18	40	16	58	20
27....	26	— 12	.....	.....	31	12	32	15	35	3	22	1	28	10	41	11	50	13	43	30	46	19	58	15	44	16	48	27
28....	24	— 20	.....	.....	30	7	31	10	16	— 21	18	— 15	17	— 5	33	8	50	— 4	40	23	35	18	61	15	33	4	38	8
29....	30	— 8	.....	.....	35	3	34	12	21	— 16	26	— 18	18	—25	30	5	50	0	44	19	36	9	50	6	37	4	39	7
30....	32	0	.....	.....	43	9	40	10	31	— 11	37	— 6	30	—15	45	6	50	0	46	20	40	10	55	8	41	2	50	17
Mns..	34.0	5.2	.....	.....	46.7	21.2	47.2	25.1	.....	9.5	42.2	12.5	38.2	8.3	41.2	18.6	51.3	14.2	57.1	31.5	51.4	25.4	63.7	23.1	51.4[a]	20.4[a]	55.4	27.9

Date.	Arizona.																						Logan, Nev.	
	Bisbee.		Flagstaff.		Fort Apache.		Grand Canyon.		Parker.		Phoenix.		Prescott.		St. Michaels.		Supai.		Tucson.		Yuma.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	67	41	53	25	60	34	54	24	84	54	78	50	62	30	59	27	71	48	70	47	81	50	72	47
2.....	63	41	47	24	60	32	53	24	84	50	77	49	60	27	51	32	72	45	80	41	82	59	75	43
3.....	59	38	54	26	64	29	54	24	83	48	77	56	63	29	54	29	70	44	66	51	83	58	74	45
4.....	50	41	55	24	62	30	55	24	84	52	77	51	61	30	56	22	69	40	63	47	84	58	75	38
5.....	60	41	53	34	60	30	54	24	82	50	75	53	60	32	73	37	72	42	63	48	81	54	75	36
6.....	61	43	60	28	65	32	54	24	84	52	71	49	64	30	56	23	73	44	70	45	78	54	76	37
7.....	65	41	55	24	61	34	54	24	83	40	76	49	63	29	56	26	70	45	65	40	84	47	72	37
8.....	60	44	49	29	60	31	54	24	84	40	74	48	58	36	51	41	71	44	72	46	78	52	71	38
9.....	62	46	47	30	60	30	42	23	83	40	73	53	55	38	53	38	71	47	66	49	79	51	73	38
10.....	63	50	46	37	62	29	44	22	70	40	76	52	56	38	55	44	68	36	70	47	79	55	72	37
11.....	61	49	37	18	61	26	36	21	65	35	67	44	55	29	47	24	45	36	.....	.....	65	51	72	36
12.....	53	33	34	15	62	21	28	21	63	35	68	34	59	16	35	11	49	28	64	31	61	47	58	29
13.....	68	36	48	29	62	28	29	11	64	30	67	44	58	30	48	22	55	33	62	55	70	43	57	31
14.....	65	47	55	20	60	26	28	14	75	31	71	39	60	24	54	30	66	38	62	33	75	42	65	28
15.....	66	41	56	20	60	25	30	15	75	31	74	40	63	25	59	21	67	38	61	34	76	38	65	29
16.....	63	47	42	20	70	29	34	18	75	35	71	41	50	30	50	29	61	45	54	43	72	42	62	34
17.....	54	33	45	17	60	21	32	20	70	37	68	40	52	18	48	20	60	33	54	31	70	49	66	30
18.....	60	34	51	14	65	18	36	18	78	38	73	34	61	19	45	17	63	36	60	24	75	47	74	32
19.....	63	35	52	14	66	18	38	20	82	35	78	39	63	17	61	19	65	37	68	33	79	44	75	32
20.....	67	46	62	17	71	21	41	24	75	22	80	44	69	19	62	20	67	37	68	34	71	43	75	37
21.....	64	47	52	21	65	27	38	23	82	35	76	42	62	23	56	24	68	36	66	43	79	39	74	34
22.....	58	43	46	16	.....	22	38	23	80	35	70	40	54	21	50	24	67	36	60	32	74	38	72	33
23.....	53	34	41	17	.....	20	40	23	75	22	71	43	51	19	48	14	59	32	62	30	71	52	69	30
24.....	54	39	48	14	.....	18	38	23	72	24	72	45	58	13	54	13	63	31	57	50	73	52	67	29
25.....	57	30	50	11	.....	8	34	20	75	24	75	38	61	14	52	12	60	30	65	38	76	44	71	31
26.....	63	32	53	16	.....	10	30	18	76	24	74	34	57	19	48	19	65	30	63	36	78	37	70	28
27.....	54	24	36	18	.....	18	28	16	72	24	69	34	63	15	34	12	64	29	55	25	74	36	59	28
28.....	43	22	28	13	.....	16	21	10	70	22	56	38	38	12	32	6	48	27	43	34	60	38	60	24
29.....	45	24	38	6	.....	18	24	14	70	20	61	34	50	6	42	2	50	24	55	35	61	35	55	20
30.....	47	27	47	8	.....	18	23	12	70	18	70	30	59	11	52	2	53	25	59	30	67	39	62	20
Mns.....	58.9	38.3	48.0	20.2	62.7[1]	24.0	38.8	20.0	76.2	34.8	72.2	42.9	58.2	23.3	51.4	22.0	63.4	36.5	62.9[a]	39.0[a]	64.7	46.5	68.8	33.0

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1911.

DISTRICT NO. 10, GREAT BASIN.

ALFRED H. THIESSEN, District Editor.

GENERAL SUMMARY.

The notable feature of the weather for November, 1911, was the low temperatures that prevailed for the greater portion of the month. At some places the mean monthly temperature was the lowest of record. In this particular the weather was in marked contrast to that of November, 1910, when the temperature averaged almost as much above normal as it was below during the present month. The cold weather interfered considerably with farming operation, and in some sections sugar beets were frozen in the ground.

The precipitation averaged below normal, and about the same as that of November last year. The snow cover in the Nevada area was light at the end of the month, and this was also true for the Utah area, except in the mountains, where there was from 1 to 3 feet.

The average number of rainy days was 5; clear days, 16; partly cloudy days, 6; and cloudy days, 8.

TEMPERATURE.

The mean temperature for the district averaged 34.3°, which is about 4° below normal, considering only the records of the older stations. The temperature chart shows that the lowest means occurred in Idaho, Wyoming, in the mountainous districts of the Utah area, and in the northeastern portion of Nevada. Every station but one reported monthly mean temperatures below normal. The greatest minus departures occurred in the Utah, Idaho, and Wyoming areas. The lowest mean temperature was 22.2° at Border, Wyo., which was 6.8° below normal; the highest was 46.8° at Jean, Nev.; the only other means above 40° were those of Lemay and Midlake near and on Great Salt Lake and of Lahontan and Lewer's Ranch in Nevada.

The month began with nearly normal temperatures in all portions of the district, and so continued during the first decade. On the 10th the temperatures dropped sharply over the whole district. The weather chart for the morning of the 10th showed generally low pressure over the entire West, with the center of depression over western Wyoming. During the next 24 hours this condition moved rapidly to the east, and was followed by an area of high pressure, which on the morning of the 11th covered the entire northwest, attended by temperatures ranging from 10° to 15° below the seasonal averages. Temperatures fell lower at most places on the 12th, but on the 13th the weather moderated, and nearly normal conditions were attained by the 15th. After this date colder weather ensued, which continued until the end of the month.

The lowest temperature for the month was −16° on the 10th at Scipio, Utah. The highest there on that date was 57°, making the daily range 73°, which was he greatest daily range for the district.

At Salt Lake City, Utah, the thermograph trace of the 10th showed that the mercury attained its highest mark, 57°, at 1.30 p. m., reaching 24° at midnight, 16° on the morning of the 11th, and 13° on the 12th. At Scipio the observations are made at 6 p. m., and as the maximum temperature probably occurred about 1 p. m. there was a range of 73° within 5 or 6 hours.

An examination of the reports from other stations reveal like temperature conditions for the 10th and 11th. Most of the observers take their thermometer readings at 6 p. m. and at that time also record the current temperatures. A study of these temperatures show that the rapid fall of the mercury observed at Salt Lake City and Scipio was general throughout Utah.

PRECIPITATION.

The monthly precipitation averaged 0.81 inch, which is about 0.26 inch below normal. The heavier amounts fell in the extreme eastern portion of the district and in the lake region in western Nevada and eastern California, where 2 inches or more occurred at a number of stations. In western Utah and in most of Nevada very small amounts fell, 9 stations reporting no precipitation or only a trace.

The first 4 days of the month were fair. Precipitation began on the 4th in Utah, Idaho, and Wyoming and on the 5th in Oregon, and continued until the 16th or 17th at most places in these States. In the remainder of the district precipitation began on the 7th and 8th and continued until the 10th, and more occurred on the 15th and 16th. The remainder of the month was fair, with the exception of light precipitation on the 26th, at many stations in the Utah area.

The greatest monthly amount was 3.69 inches at McKinney, Cal. The greatest 24-hour amount was 1.80 inches at Deer Park, Cal., on the 10th.

TABLE 1.—*Climatological data for November, 1911. District No. 10, Great Basin.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Border	Uinta	6,085	9	22.2[a]	− 6.8	49	3	−14	28	40[a]	1.04	+ 0.06	0.46	10.0	4	16[a]	4[a]	9[a]		S. W. Condron.
Cokeville	do	6,204	2	23.0	.....	53	15	−14	12	44	1.18	.....	0.45	13.0	7	16	4	10	nw.	E. J. Tuckett.
Evanston	do	6,880	15	25.8	− 6.1	50	20	−10	28	38	1.25	+ 0.37	0.53	5.0	5	13	3	14	sw.	Frank Tucker.
Idaho.																				
Geneva	Bear Lake	.....	3	.....	.....	.....	.....	.....	.....	.....	2.60	.....	1.00	16.0	6	18	3	9	.....	F. W. Boehme.
Grace	Bannock	5,400	5	28.0	.....	60	2	− 2	27	46	1.22	.....	0.25	6.0	8	9	0	21	nw.	Donald R. Shirk.
Paris	Bear Lake	5,946	17	.....	.....	54	4	.....	.....	.....	1.73	+ 0.56	0.50	24.0	7	21	3	6	w.	John Norton.
Weston	Oneida	4,460	13	31.2	− 5.2	58	1	3	28	38	1.51	+ 0.14	0.35	3.0	7	11	5	14	sw.	Wm. T. Chatterton.
Utah.																				
Alpine	Utah	4,900	14	.....	.....	.....	.....	.....	.....	.....	0.52	− 1.02	0.25	4.5	3	20	4	6	.....	T. F. Carlisle.
Beaver	Beaver	6,000	8	34.9	.....	66	4	− 1	12	40	0.45	.....	0.25	4.5	2	16	10	4	n.	James Connell.
Black Rock	Millard	4,872	11	33.5	.....	64	4	− 4	20	48	0.20	.....	0.20	2.0	1	20	5	5	.....	W. D. Livingston.
Burrville	Sevier	.....	0	30.6	.....	57	17	−13	12	48	0.60	.....	0.60	6.0	1	.....	.....	.....	.....	F. R. Curtis.
Castle Rock	Summit	6,244	8	.....	.....	.....	.....	.....	.....	.....	0.75	.....	0.15	14.0	10	8	9	13	w.	David Moore.
Cedar City	Iron	5,750	6	37.7[a]	.....	63	20	6	28	38	0.20	.....	0.10	1.0	2	19	5	6	n.	Parley Dalley.
Center	Tooele	.....	0	31.4	.....	56	3	−10	12	42	0.76	.....	0.50	7.0	4	10	10	10	n.	L. C. Peterson.
Clarkston	Cache	.....	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. J. Griffiths.
Corinne	Boxelder	4,240	41	33.2	− 4.2	58	1	7	29	28	0.05	− 0.99	0.05	0.5	1	11	6	13	.....	A. C. Murphy.
Deseret	Millard	4,541	17	33.8	− 4.4	61	1†	− 4	12	41	0.51	+ 0.04	0.34	.....	2	19	5	6	n.	Samuel W. Western.
Enterprise	Washington	4,270	3	.....	.....	.....	.....	.....	.....	.....	0.03	.....	0.03	0	1	21	6	3	s.	John Day.
Erekson	Tooele	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	N. W. Erekson.
Fairfield	Utah	4,866	.....	.....	.....	.....	.....	.....	.....	.....	0.33	.....	0.20	0.5	2	21	4	5	n.	W. Harden Ashby.
Farmington	Davis	4,267	11	35.8	− 4.8	56	15	10	12	30	1.63	+ 0.01	0.60	13.0	6	16	5	9	n.	Charles Boylin.
Fillmore	Millard	5,100	21	37.0	− 5.1	70	15	4	12	46	0.90	− 0.10	0.52	.....	2	.....	.....	.....	.....	J. J. Starley.
Frisco	Beaver	7,318	17	37.4	− 2.5	67	11	4	28	59	0.00	− 0.50	0.00	0	0	.....	.....	.....	.....	Essen Nordberg.
Garrison	Millard	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. M. Smith.
Government Creek	Tooele	5,277	11	33.6	− 5.4	58	10	− 2	12	37	0.51	− 0.64	0.42	4.0	3	19	1	10	n.	Walter James.
Granger	Salt Lake	.....	0	34.4[b]	.....	57	1†	7	12	35	1.37	.....	0.45	8.0	6	.....	.....	.....	.....	Geo. E. Greene.
Grantsville	Tooele	.....	2	.....	.....	.....	.....	.....	.....	.....	0.93	.....	0.70	7.0	4	18	4	8	.....	J. C. Woodmansee.
Grouse Creek	Boxelder	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.71	.....	0.20	2.8	6	10	6	14	s.	Philip Paskett.
Heber	Wasatch	5,606	18	31.0	− 4.3	56	6†	− 4	28	42	1.73	+ 0.37	0.65	9.5	9	15	3	12	n.	John Crook.
Henefer	Summit	5,301	12	30.4	− 5.0	56	3†	− 9	28	44	2.04	+ 0.34	0.40	15.0	10	12	4	14	n.	William Brewer.
Hooper	Weber	4,436	.....	.....	.....	.....	.....	.....	.....	.....	0.92	.....	0.52	.....	2	.....	.....	.....	.....	T. M. Jones, jr.
Ibapah [near]	Tooele	7,500	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. S. Lawton.
International	do	5,370	.....	.....	.....	.....	.....	.....	.....	.....	1.21	.....	0.68	11.1	7	7	14	9	se.	I. S. R. Co.
Iosepa	do	.....	.....	35.8	.....	79	6	2	12	38	0.65	.....	0.65	.....	1	4	11	15	n.	Geo. K. Hubbell.
Joy	Juab	.....	.....	35.4[a]	.....	54	3	2	12	33	0.17	.....	0.15	1.7	2	.....	.....	.....	s.	Samuel Hagans.
Junction	Piute	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.71	.....	0.40	1.0	3	20	6	4	.....	Joseph Jensen.
Kanosh	Millard	5,250	3	.....	.....	.....	.....	.....	.....	.....	1.17	.....	0.59	.....	2	.....	.....	.....	.....	Geo. Crane.
Kelton	Boxelder	4,220	33	33.6	− 3.8	57	2†	0	29	37	0.10	− 0.27	0.05	1.0	2	9	11	10	ne.	F. W. Klock.
Lemay	do	.....	.....	41.0	.....	61	2†	8	30	29	0.00	.....	0.00	0	0	16	10	4	.....	Agent, S. P. Co.
Levan	Juab	5,010	21	31.8	− 5.2	56	4	− 5	12	33	0.95	− 0.01	0.62	8.6	4	16	4	10	n.	William Brown.
Logan	Cache	4,507	20	32.2	− 5.7	52	3	6	12†	26	1.70	+ 0.47	0.75	.....	9	.....	.....	.....	.....	Utah Exp. Station.
Low	Tooele	.....	.....	38.3	.....	58	15	10	29	27	0.15	.....	0.15	1.5	1	13	15	2	n.	T. G. Morris.
Lucin	Boxelder	4,504	7	32.1	.....	60	1	0	29	46	0.00	.....	0.00	0	0	14	2	14	.....	C. J. Burke.
Lund	Iron	5,086	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Job F. Hall.
Manti	Sanpete	5,575	17	33.3	− 4.0	59	1†	− 8	12	47	0.49	− 0.47	0.38	5.0	3	14	2	14	.....	J. M. Anderson.
Maple Creek	Utah	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.95	.....	0.30	5.9	6	15	7	8	.....	Lewis W. Gillilan.
Marion	Summit	6,750	7	.....	.....	.....	.....	.....	.....	.....	1.48	.....	0.43	12.0	10	8	6	16	nw.	Jas. Woolstenhulme.
Marysvale	Piute	6,180	12	33.0	− 4.2	60	4	− 8	12	46	0.40	− 0.52	0.20	5.5	4	8	15	7	n.	John W. Henry.
Meadowville	Rich	6,200	12	28.2	− 5.6	47	15	3	12†	28	0.80	− 0.50	0.30	5.0	5	13	2	15	w.	J. S. Moffat.
Mercur	Tooele	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. H. Franklin.
Midlake	Boxelder	.....	.....	40.8	.....	57	14	20	11	21	0.10	.....	0.10	T.	1	13	9	8	s.	Agent, S. P. Co.
Midvale	Salt Lake	.....	.....	35.5	.....	60	3	4	11	41	1.38	.....	0.45	11.9	7	15	7	8	n.	Joseph Williams.
Milford	Beaver	4,962	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Agent L. A. S. P. Co.
Millville	Cache	4,848	16	.....	.....	.....	.....	.....	.....	.....	1.99	+ 0.34	0.54	.....	11	8	14	8	s.	Fred Yeates.
Minersville	Beaver	5,070	14	.....	.....	.....	.....	.....	.....	.....	0.45	− 0.44	0.41	3.0	2	.....	.....	.....	.....	Geo. Roberts, sr.
Modena	Iron	5,479	11	33.2	− 5.8	60	4	− 1	29	40	0.13	− 0.47	0.09	0.2	2	20	5	5	w.	U. S. Weather Bureau.
Morgan	Morgan	5,068	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. Visick.
Moroni	Sanpete	5,519	3	33.8[d]	.....	58	2	− 3	12	38	1.16	.....	0.63	11.2	5	14	7	9	w.	B. F. Eliason.
Mosida	Utah	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.64	.....	0.37	2.0	5	19	5	6	ne.	Roy P. Curtis.
Mount Nebo	do	4,650	10	37.1	.....	67	20	4	12	41	0.51	.....	0.26	.....	2	21	5	4	n.	D. C. Walkey.
Nephi [near]	Juab	.....	8	.....	.....	.....	.....	.....	.....	.....	0.44	.....	0.31	.....	2	.....	.....	.....	.....	S. Boswell.
Newcastle	Iron	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. W. Jones.
Oak City	Millard	4,900	7	34.9	.....	58	4	4	12	42	1.91	.....	0.85	.....	4	12	12	6	.....	Peter Nielson.
Ogden	Weber	4,310	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. Van De Graff.
Park City	Summit	7,800	14	28.2[a]	.....	48[a]	1†	− 3[a]	27	40[a]	2.10	.....	0.60	.....	6	2[a]	11[a]	16[a]	.....	Gertrude Evans.
Park Valley	Boxelder	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.72	.....	0.37	.....	2	21	0	9	nw.	Thomas Stirland.
Parowan	Iron	5,970	20	36.4	− 2.6	62	6	1	12	37	0.40	− 0.29	0.30	4.0	2	20	0	10	.....	Scott Matheson.
Payson	Utah	4,637	8	.....	.....	.....	.....	.....	.....	.....	1.55	.....	0.69	.....	3	19	4	7	sw.	D. L. Coombs.
Pelican Point	do	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. M. Mendenhall.
Pine Cliff Ranch	Summit	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.60	.....	0.55	.....	4	.....	.....	.....	.....	L. E. Leavitt.
Pinto	Washington	5,907	15	32.0[b]	− 4.4	60	20†	− 3	29	49	0.13	− 1.19	0.12	0.1	2	20	6	4	n.	J. H. Harrison.
Promontory	Boxelder	4,913	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. C. Houghton.
Provo	Utah	4,532	23	34.2	− 5.6	65	2	4	12	47	0.58	− 0.56	0.25	.....	4	15	9	6	n.	James A. Oliver.
Randolph	Rich	6,442	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William Rex.
Revier	Salt Lake	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.74	.....	0.30	.....	4	.....	.....	.....	.....	E. L. Terry.
Richfield	Sevier	5,350	21	33.2	− 4.4	62	4	1	12	42	0.34	− .08	0.34	.....	1	19	0	11	.....	Joseph J. Jensen.
Richmond	Cache	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.50	.....	0.35	12.2	10	9	7	14	.....	J. R. Thompson.
Saltair	Salt Lake	4,220	9	36.1	.....	55	10	14	12	25	0.98	.....	0.30	5.0	8	.....	.....	.....	.....	E. J. Bench.
Salt Lake City	do	4,360	38	37.0	− 3.4	59	20	13	12	33	1.48	+ 0.06	0.62	7.5	9	9	8	13	nw.	U. S. Weather Bureau.
Scipio	Millard	5,260	18	32.0	− 5.2	60	4†	− 16	10	73[b]	0.90	− 0.34	0.84	4.0	2	14	7	9	n.	Thomas Memmott.
Showell	Boxelder	4,360	.....	.....	.....	.....	.....	.....	.....	.....	0.16	.....	0.06	2.5	4	15[b]	2[b]	5[b]	.....	Richard Ligner.
Silver City	Juab	6,127	2	.....	.....	.....	.....	.....	.....	.....	0.29	.....	0.24	4.0	3	10	16	4	nw.	J. L. Stark.
Spanish Fork	Utah	4,585	2	35.7	.....	59	1†	0	12	33	1.59	.....	0.56	.....	6	11	14	5	.....	W. P. Shippee.
Strawberry Tunnel	do	7,650	6	27.4	.....	55	1	− 9	12	43	2.40	.....	0.55	24.5	9	13	6	11	.....	F. W. Cater.
Thistle	do	5,075	20	30.2	− 7.0	58	1	− 11	12	47	2.88	+ 1.88	1.00	24.0	7	16	4	10	n.	John Thorgierson.
Tooele	Tooele	4,900	16	35.7	− 4.2	57	15†	4	12	29	1.18	− 0.35	0.70	.....	5	5	10	15	ne.	E. A. Bonelli.
Utah Lake Pumping Station.	Utah	4,500	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Knight.
Vernon	Tooele	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.75	.....	0.58	7.6	3	18	6	6	nw.	Glynn Bennion.
Wendover	do	.....	.....	37.6	.....	60	3†	7	29	41	0.03	.....	0.03	0	1	8	13	9	w.	J. S. Cooper.
Whisky Creek	Millard	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. B. Perkins.
Woodruff	Rich	6,500	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. Sidney Pusey.

TABLE 1.—*Climatological data for November, 1911. District No. 10*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon.																				
Burns	Harney	4,157	20																	
Cliff	Lake	4,300	4	33.2	.....	65	3	− 11	11	52	0.41	.....	0.33	0.5	3	8	10	12	nw.	John C. Green.
Paisley	....do	4,500	8	37.8	.....	58	3	14	11†	36	0.14	.....	0.14	0.2	1	17[a]	4[a]	8[a]	w.	E. C. Woodward.
California.																				
Tahoe	Placer	6,240	1	34.2	.....	56	5	1	11	33	1.79	.....	0.80	12.0	4	22	4	4	w.	R. M. Watson.
Truckee	Nevada	5,819	40	33.0	− 3.5	60	6	− 6	10	44	0.60	− 1.72	0.60	6.0	1	20	7	3	se.	Southern Pacific Co.
Nevada.																				
Austin	Lander	6,594	22	36.9	− 1.8	61	13	8	28	47	0.12	− 0.51	0.11	1.2	2	23	0	7	n.	F. O. Booe.
Battle Mountain	....do	4,843	40	33.1	− 5.6	62	18	1	23	51	0.20	− 0.30	0.20	2.0	1	23	5	2	.....	Southern Pacific Co.
Beowawe	....do	4,905	40	37.2	+ 0.3	73	15†	1	26	57	0.02	− 0.54	0.02	0.2	1	22	5	3	w.	Do.
Carlin	Elko	5,232	40	32.4	− 1.1	68	1†	− 5	27	57					1	27	0	3	.....	Do.
Carson Dam	Churchill	4,032	4	38.4	.....	63	5†	10	12	39	T.	.....	T.	0	0	21	6	3	e.	U. S. Reclamation Service.
Cherry Creek	White Pine	6,450	3	34.5	.....	58	20	1	12	42	0.58	.....	0.31	5.0	3	18	9	3	w.	J. H. Leishman.
Clover Valley	Elko	6,000	11																	I. F. Wiseman.
Columbia	Esmeralda	5,750	4	38.8	.....	61	7	14	12	38	0.10	.....	0.10	0	1	26	4	0	nw.	A. Booth.
Dutton	Elko	5,100	3																	Golconda Cattle Co.
Elko	....do	5,432	40																	E. J. Clark.
Ely	White Pine	6,421	20																	Rev. G. C. Hunting.
Eureka	Eureka	6,500	8	36.0	.....	59	3†	4	12†	43	0.18	.....	0.10	3.5	2	14	7	9	n.	Clay Simms.
Fallon	Churchill	3,965	6	37.5	.....	63	7†	7	23	42	T.	.....	T.	T.	0	24	1	5	ne.	U. S. Experiment Station.
Fernley	Lyon	4,200	38	38.6	− 0.9	67	6	7	30	49	0.12	− 0.25	0.12	0	1	22	8	0	.....	Mrs. G. A. Steele.
Gardnerville	Douglas	4,830	11																	Wm. Dangberg.
Geyser	Lincoln		7	33.6	.....	65	1†	0	16†	53	T.	.....	T.	0	0	13	16	1	s.	Mrs. J. F. Wambolt.
Glenbrook	Douglas		2	41.8	.....	66	8	10	11	42	0.60	.....	0.40	6.0	2	20	2	8	e.	C. C. Henningsen.
Golconda	Humboldt	4,697	32	35.6	− 4.9	58	1†	7	11	41	0.30	− 0.07	0.30	3.0	1	25	4	1	.....	Southern Pacific Co.
Halleck	Elko	5,631	18	29.5	− 3.1	59	1†	− 8	27	51	0.53	+ 0.01	0.23	1.0	4	14	12	4	.....	Do.
Jean	Clark	2,074	3	46.8	.....	72	6	14	29†	45	0.00	.....	0.00	0	0	27	2	1	sw.	Salt Lake Route.
Lahontan	Churchill		0	42.2	.....	65	14	17	23	36	0.08	.....	0.08	0	1	22	4	4	w.	U. S. Reclamation Service.
Lewers' Ranch	Washoe	5,500	23	40.3	− 3.3	65	2†	13	12	41	1.75	− 1.55	1.20	0	2	20	8	2	.....	Ross Lewers.
Lovelocks	Humboldt	3,977	17	35.3	− 6.7	63	3	6	12†	47	0.00	− 0.20	0.00	0	0	15	12	3	s.	C. H. Allender.
Millett	Nye		3	33.4	.....	68	24	− 3	23	68	0.10	.....	0.10	0	1	21	5	4	s.	Fred J. Jones.
Mina	Mineral	4,600	4																	Southern Pacific Co.
Potts	Nye	6,990	18	30.5	− 4.3	54	15	0	12†	49	0.18	− 0.29	0.10	5.0	2	11	9	10	n.	Miss Mamie Potts.
Quinn River Ranch	Humboldt	4,850	9	39.5	.....	71	6	8	30	45	0.42	.....	0.35	0	3	18	2	10	sw.	F. M. Payne.
Rebel Creek	....do		0																	E. J. Hyatt.
Reno	Washoe	4,532	40	39.8	− 1.2	64	3	16	11	39	0.24	− 0.85	0.21	0.2	3	20	10	0	sw.	U. S. Weather Bureau.
Soda Lake	Churchill	4,534	4																	U. S. Reclamation Service.
Tecoma	Elko	4,812	33	31.6	− 2.4	62	3	− 4	29	43	0.11	− 0.31	0.10	1.0	2	13	5	12	ne.	Southern Pacific Co.
Tonopah	Nye	6,090	6	38.5	.....	56	9	12	11	34	0.02	.....	0.02	0.5	1	20	8	2	w.	U. S. Weather Bureau.
Wabuska	Lyon	4,347	8																	Andrew Reid.
Wells	Elko	5,631	32	29.4	− 4.2	52	6†	− 9	12	46	0.50	− 0.18	0.40	4.0	2	10	9	11	w.	Southern Pacific Co.
Winnemucca	Humboldt	4,432	32	35.6	− 1.9	63	3	6	30	48	0.29	− 0.45	0.13	1.5	5	13	5	12	sw.	U. S. Weather Bureau.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
**Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1911. District No. 10, Great Basin.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Wyoming.																																
Border	Bear				0.04		T.	0.16	0.46	0.38	T.			T.																	
Cokeville	do					T.	0.10	.03	.04	.40	0.45	T.		T.	0.03	T.	0.13	T.	T.	T.							T.					1.18
Evanston	do				T.	T.	.12	T.	.12	.21	.53			T.			.27	T.									T.					1.25
Idaho.																																
Geneva	Bear				.10	0.20	.30				1.00			0.70													0.30					2.60
Grace	do				.25	.10	.20		.25	.10	.15	0.07			.10	T.																1.22
Paris	do					.14		.18	.22	.50	.40			.13		0.16																1.73
Weston	do					.09	.09	.15		.32	.35			.20		.31																1.51
Utah.																																
Alpine	G. S. Lake										.25						.22										.05					0.52
Beaver	Sevier Lake	T.						T.	T.			.25					.20															0.45
Black Rock	do											.20					T.															0.20
Burrville	do												.60																			0.60
Castle Rock	G. S. Lake						.05	.10	.05	.05	.10	.15			.05		.10										.05	0.05				0.75
Cedar City	Desert	0.10										.10					T.															0.20
Center	do								.03	.03	T.	.50					.20										T.					0.76
Clarkston	G. S. Lake																															
Corinne	do				T.			T.			T.						.05															0.05
Deseret	Sevier Lake										.34					.17																0.51
Enterprise	G. S. Lake	.03																														0.03
Erekson	Desert																															
Fairfield	G. S. Lake								.13		.20									T.												0.33
Farmington	do				T.			.07	.26	T.	.30	.35					.60	T.									.05					1.63
Fillmore	Sevier Lake					T.		T.				.52					.38						T.									0.90
Frisco	Desert																															0.00
Garrison	do																															
Government Creek	do								.07		.42						.02										T.					0.51
Granger	do					.05			.36	.11		.30					.45										.10					1.37
Grantsville	G. S. Lake								.09	.05	.70					0.09																0.93
Grouse Creek	Desert						.04	.13		.07	.19			T.			.20										.08					0.71
Heber	G. S. Lake				.10	.05		.08	.15	.30	.65	.15					.15										.10					1.73
Henefer	do					.04	.20	.18	.15	.18	.40	.14		*	.07		.39										.29					2.04
Hooper	do								.40			.52																				0.92
Ibapah (near)	Desert																															
International	G. S. Lake						.05	.02	.16		.68						.24	0.05									.01					1.21
Iosepa	Desert								T.	T.	.65																					0.65
Joy	do									.02	.15																					0.17
Junction	Sevier Lake					T.		T.	.11			.40					.20															0.71
Kanosh	do											.59					.58															1.17
Kelton	G. S. Lake									.05				.05	T.																	0.10
Lemay	Desert																															
Levan	Sevier Lake							.04	.05			.62					.24										T.					0.95
Logan	G. S. Lake					.15	.08		.14	.18	.08	.22			.01		.75										.09					1.70
Low	do								T.		.15																					0.15
Lucin	Desert																															0.00
Lund	do																															
Manti	Sevier Lake					.05		T.				.38					.06															0.49
Maple Creek	G. S. Lake					.12		T.	.15	.06		.21					.30	T.									.11					0.95
Marion	do				T.	.11	.08	.15	.13	.43	.14	.04	.24	T.			.07	T.									.09					1.48
Marysvale	Sevier Lake								.05	T.	.05	.10					.20						T.					T.				0.40
Meadowville	G. S. Lake							.05	.05	.20	.20			.30			T.										T.					0.80
Mercur	do																															
Midlake	do							.10	T.	T.	T.																					0.10
Midvale	do							.01	.07	.28	.45					.40	.08										.09					1.38
Milford	Sevier Lake																															
Millville	G. S. Lake					.15	.04	.12	.12	.24	.53	.02		.02	T.	T.	.54	.02									.19					1.99
Minersville	Sevier Lake				.04						.41																					0.45
Modena	Desert	.04									.09																					0.13
Morgan	G. S. Lake																															
Moroni	Sevier Lake					T.				.22		.63					.23	T.									.06	.02				1.16
Mosida	G. S. Lake					T.			.06	.07	.12	.25					.14															0.64
Mount Nebo	do											.25					.26															0.51
Nephi (near)	do																															
Newcastle	Desert																															
Oak City	Sevier Lake					.01						.80		.85			.25															1.91
Ogden	G. S. Lake																															
Park City	do					.10	.30	.20	.60	.30			.60																			2.10
Park Valley	Desert										.35					.37																0.72
Parowan	do	T.									.30						.10															0.40
Payson	G. S. Lake								.21			.65					.69															1.55
Pelican Point	do																															
Pine Cliff Ranch	do						.32		.28		.55							.45														1.60
Pinto	Desert										.01	.12																				0.13
Promontory	G. S. Lake																															
Provo	do								.16	.07	.10						T.	.25									T.	T.				0.58
Randolph	do																															
Revier	do						.20						.30					.17										.07				0.74
Richfield	Sevier Lake											.34					T.															0.34
Richmond	G. S. Lake					.09		.35	.08	.06	.34			.35		.02	.16	.01									.04					1.50
Saltair	do				T.	.01		.10	.25	.02	.17	.07					.30										.06					0.98
Salt Lake City	do				T.	.04	.01	.11	.14	.06	.36	T.				.30	.32										.14					1.48
Scipio	Desert					T.			T.	T.	.84							.06					T.									0.90
Showell	do									.06			.05			.02											.03					0.16
Silver City	do											.04				.24	.01															0.29
Spanish Fork	G. S. Lake					.05			.11	.13	.35	.39					.56										T.					1.59
Strawberry Tunnel	do				T.	.20		.15	.35	.50	.15	.55					.25	.10									.15					2.40
Thistle	do								.20	.10	.28	.80					1.00	.20									.30					2.88
Tooele	do							.02	.11	.02		.70					.33															1.18
Utah L. Pmpg. Sta.	do																															
Vernon	Desert				T.				.06	T.	.58						.11								T.							0.75
Wendover	do								.03		T.																					0.03
Whisky Creek	do																															
Woodruff	G. S. Lake																															

TABLE 2.—*Daily precipitation for November, 1911. District No. 10*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Oregon.																																
Adel	SE. drainage																															
Ana River	do							T.		T.	.04	.02				.15															0.21
Bear Valley	do																															
Burns	do																															
Burns Mill	do					.15	.15			.20	.20	.03		.05	.31	.12																1.21
Christmas Lake	do					T.		.18	T.	T.	.25					.32										T.						0.75
Cliff	do					T.		.05			T.					.33	.03															0.41
Diamond	do					T.		.21	T.	T.	.16	T.				.36	.04															0.77
Embody	do					T.	.55			.05	.51			.10	1.12	.10	.10															2.53
Fort Rock	do					T.		T.	T.	.21						.27	.04									T.						0.52
Paisley	do					T.			T.		T.			.14																	0.14
Seneca	do							.20			.40						.66				.02										.06	1.34
Valley Falls	do					T.		.01	T.			.86	.16																			1.03
California.																																
Bijou	Truckee								T.	.04	.57					.52																1.13
Boca	do										1.50																					1.50
Deer Park	do									.10	1.80					.40	.20															2.50
Glen Alpine	do								.05	1.00	.60					.50																2.15
Hobart Mills	do									.13	1.22	.10				.24	.37															2.06
Lundy	East Walker										.56																					0.56
McKinney	Truckee								.07	T.	1.64	1.16				.56	.26															3.69
Markleeville	East Carson									T.	1.21					.35																1.56
Shields's ranch	East Walker										.50					.10																0.60
Silver Creek	East Carson									.02	1.40					.46																1.88
Tahoe	Truckee									.38	.80					*	.62															1.79
Tallac	do										.30	T.				.25	.40															0.95
Truckee	do									.60						T.																0.60
Woodfords	West Carson																															
Nevada.																																
Arthur	Humboldt							*	.04	.02	.60					*	.03															0.69
Austin	Reese															.01		.11														0.12
Battle Mountain	Humboldt										.20																					0.20
Beowawe	do										.02																					0.02
Bishop	do								.42		.32					.35																
Carlin	do																															1.09
Carson Dam	Carson										T.																					T.
Cherry Creek	Humboldt								.31		.08						.19															0.58
Clover Valley	do																															
Columbia	Desert	.10																														0.10
Dry Farm	Humboldt							.11			.04						.09															0.24
Dutton	do																															
Elko	do																															
Ely	do																															
Eureka	do										.08					.10																0.18
Fallon	Carson							T.			T.					T.	T.															T.
Fernley	Truckee										.12																					0.12
Gardnerville	Carson																															
Geyser	Humboldt																	T.														T.
Glenbrook	Truckee										.40					.20																0.60
Golconda	Humboldt										.30																					0.30
Halleck	do							.23		.03	.10					.17																0.53
Jean	Desert																															0.00
Lahontan	Carson									.08	T.					T.																0.08
Lewers's ranch	Truckee									1.20						.55																1.75
Lovelocks	Humboldt																															0.00
Massacre Lakes	Desert																															
Mill City	Humboldt							.20			.08																					0.28
Millett	Reese																.10															0.10
Mina	Desert																															
North Fork	Humboldt							.20	T.	.10	.70			.10			T.															1.10
Potts	Reese								T.		T.	.08					.10															0.18
Quinn River Ranch	Humboldt							T.			.35					.05	.02															0.42
Rebel Creek	do																															
Reno	Truckee									.12	.09					.03																0.24
Rose Creek	Humboldt																															
Skelton	do										T.					*	.10										*					0.10
Smith	West Walker										.30																					0.30
Soda Lake	Carson																															
Spooner's ranch	Truckee									*	.50					.20																0.70
Sweetwater	East Walker									T.																						T.
Tecoma	Humboldt							.01				.10																				0.11
Tonopah	Desert										.02																					0.02
Wabuska	Walker																															
Wells	Humboldt							.40		.10																						0.50
Willow Point	Little Humb'lt																															
Winnemucca	Humboldt							.09		T.	.13	.02				.03	.02															0.29

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.

‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1911. District No. 10, Great Basin.*

Date.	Wyoming.				Idaho.		Utah.																			
	Border.		Evanston.		Weston.		Corinne.		Deseret.		Government Creek.		Joseph.		Marysvale.		Meadowville.		Modena.		Henefer.		Parowan.		Provo.		Salt Lake City.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	45	11	43	21	58	20	58	30	61	33	53	26	60	35	51	35	43	20	51	33	52	22	54	35	60	25	53	40
2	46	6	47	10	50	14	49	23	56	18	49	20	56	20	56	18	42	12	54	22	54	11	57	27	65	18	51	34
3	49	11	48	14	55	17	51	22	58	15	52	33	59	21	58	12	46	20	54	15	56	12	58	20	57	12	55	31
4	45	22	46	22	45	29	47	30	60	19	56	31	54	26	60	15	45	20	60	20	56	21	59	24	57	21	51	38
5	36	26	35	19	42	25	43	31	50	30	46	26	49	27	49	30	39	30	55	22	45	26	53	35	50	33	48	36
6	30	10	40	28	50	30	48	38	61	25	52	36	79	43	58	22	46	31	69	31	50	27	62	29	55	34	50	38
7	35	25	36	12	34	20	40	24	53	30	47	27	52	28	55	15	39	16	57	24	38	17	53	25	48	19	45	34
8	34	23	32	23	39	27	43	29	50	23	43	28	48	30	50	30	41	28	53	26	41	26	52	27	43	23	42	35
9	40	20	30	24	38	19	43	32	57	27	46	22	52	35	55	31	35	26	54	35	41	31	59	39	49	33	45	37
10	34	2	38	25	45	23	48	27	58	40	58	35	56	25	51	40	35	22	50	30	48	26	55	37	57	30	57	24
11	17	−12	25	− 5	25	13	29	15	40	13	38	12	37	5	44	8	30	7	30	12	26	12	46	9	32	14	24	16
12	.....	.....	25	− 3	28	4	31	17	27	− 4	35	− 2	32	2	25	− 8	25	3	34	8	30	0	33	1	35	4	29	13
13	14	−10	32	7	35	21	35	11	39	15	40	18	37	20	46	13	37	9	48	23	39	14	48	21	45	23	43	28
14	36	27	38	12	40	27	44	28	49	12	47	24	48	19	55	18	40	28	54	19	52	21	49	23	55	25	49	32
15	46	29	45	18	47	35	47	37	57	23	46	32	57	34	58	21	47	30	55	23	50	24	59	27	56	26	56	36
16	35	24	40	27	38	29	47	30	49	32	45	27	54	32	57	36	37	25	43	25	44	27	48	25	50	29	36	37
17	34	16	35	20	36	24	39	23	45	21	39	18	45	28	44	8	37	23	46	15	39	11	49	23	36	21	39	27
18	36	29	35	23	43	31	45	30	51	19	47	23	51	24	49	14	39	27	50	17	49	30	55	22	50	23	50	32
19	44	31	40	30	52	36	47	37	57	21	52	30	57	33	52	18	43	33	55	17	56	30	60	25	55	28	55	40
20	43	22	50	29	53	26	55	28	55	23	56	30	55	25	58	20	42	27	58	19	56	22	61	26	57	23	59	36
21	36	11	42	20	54	26	48	27	58	20	50	34	52	29	56	20	40	22	56	20	54	20	57	25	61	24	49	35
22	33	10	35	16	42	22	40	27	53	18	39	16	47	25	47	24	35	19	41	20	42	17	45	23	44	19	39	29
23	26	1	38	8	39	14	38	17	46	12	41	16	48	16	45	11	32	11	43	9	43	11	45	12	43	14	45	25
24	29	2	40	11	43	15	41	19	46	12	41	16	41	16	50	10	34	14	46	10	48	12	49	17	44	14	42	26
25	29	3	42	12	44	16	41	18	49	14	52	19	48	18	51	11	36	15	49	11	48	13	52	17	48	14	45	26
26	30	6	35	24	43	28	40	29	45	18	40	24	44	24	41	14	35	25	50	17	40	21	44	13	41	21	40	32
27	20	− 4	24	2	32	15	33	20	34	20	38	4	39	22	30	14	27	11	34	13	31	2	40	16	38	20	34	21
28	10	−14	20	−10	30	3	28	8	36	4	32	7	35	6	37	7	23	4	34	5	30	− 9	37	10	34	6	33	19
29	12	−12	32	− 6	32	4	32	7	37	2	40	10	36	3	42	− 2	28	3	35	− 1	35	− 7	43	6	38	5	35	16
30	32	−13	38	5	40	8	35	11	44	5	43	14	40	9	47	3	35	7	44	4	43	− 1	49	12	43	8	40	20
Mns.	*34.0	*10.3	36.9	14.6	41.7	20.7	42.2	24.2	49.4	18.3	45.4	21.9	48.9	22.7	49.2	16.9	37.2	19.3	48.4	18.1	44.5	16.3	51.0	21.7	48.2	20.3	44.6	29.4

Date.	Oregon.		Nevada.																							
	Burns.		Cherry Creek.		Columbia.		Eureka.		Fallon.		Halleck.		Jean.		Lovelocks.		Millett.		Quinn River Ranch.		Reno.		Tecoma.		Tonopah.		Winnemucca.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	.....	.....	53	29	52	33	55	24	59	26	59	8	64	41	59	35	57	20	65	25	59	32	58	22	48	32	60	27
2	.....	.....	52	20	55	29	54	29	60	21	57	8	66	48	60	24	58	14	67	24	62	26	58	18	51	37	61	16
3	.....	.....	55	22	56	29	59	23	61	22	59	15	67	38	63	20	61	11	65	30	64	25	62	19	52	37	63	15
4	.....	.....	53	25	58	28	57	26	62	22	54	10	71	34	61	19	60	13	60	38	62	28	54	21	55	39	59	25
5	.....	.....	49	22	57	28	52	26	62	21	47	37	70	37	58	19	62	12	59	20	63	27	55	22	53	34	55	18
6	.....	.....	55	40	59	32	58	30	62	28	54	17	72	38	61	28	60	25	71	38	63	31	57	20	56	38	59	33
7	.....	.....	51	25	61	33	52	32	63	34	48	30	71	36	60	30	59	25	57	42	59	39	52	18	53	38	55	36
8	.....	.....	45	31	54	30	46	31	56	32	45	35	69	42	56	34	50	30	53	40	53	44	48	33	50	33	50	37
9	.....	.....	48	35	57	33	48	34	57	42	47	36	63	41	53	31	53	42	49	38	50	39	48	33	56	39	49	36
10	.....	.....	42	30	56	48	48	28	52	46	44	8	63	32	51	26	50	30	46	27	45	23	50	24	50	16	48	18
11	.....	.....	32	11	44	17	34	14	46	15	23	−5	58	32	34	12	34	15	46	18	38	16	25	5	24	12	30	9
12	.....	.....	43	1	43	14	42	4	47	9	39	5	45	30	43	6	40	2	32	15	49	18	32	0	37	19	33	8
13	.....	.....	45	34	42	28	41	31	59	28	42	24	51	24	58	16	51	25	55	36	47	35	35	23	37	29	46	26
14	.....	.....	51	28	55	29	52	29	63	28	52	30	64	27	54	21	58	12	59	34	61	30	53	24	49	31	54	34
15	.....	.....	57	32	51	27	57	33	61	24	50	26	68	28	49	19	59	20	54	41	51	33	50	23	51	30	51	33
16	.....	.....	48	24	44	34	43	30	52	24	37	27	61	42	54	17	54	28	43	32	49	25	45	30	37	23	43	28
17	.....	.....	44	21	52	23	48	23	58	19	46	19	59	36	58	13	49	8	54	28	56	24	50	12	46	29	52	29
18	.....	.....	51	23	56	24	55	20	56	18	51	30	65	27	58	10	55	7	60	24	59	25	55	13	51	35	56	22
19	.....	.....	53	24	55	25	58	23	59	19	50	15	67	29	59	16	57	7	60	25	62	23	55	25	50	34	58	24
20	.....	.....	58	22	59	26	58	25	60	18	51	16	68	30	50	15	62	11	59	23	61	23	48	15	54	40	60	22
21	.....	.....	51	29	54	25	58	29	52	16	50	5	69	28	54	10	54	13	50	30	50	24	47	17	48	25	48	22
22	.....	.....	40	15	44	30	38	10	46	10	49	0	59	30	49	7	49	12	49	15	48	17	46	16	37	21	43	9
23	.....	.....	47	10	54	16	55	12	47	7	39	1	54	37	52	9	48	−3	50	15	50	17	41	8	48	24	48	12
24	.....	.....	49	16	51	20	55	19	49	10	45	4	65	20	52	8	68	0	55	13	54	19	47	9	46	32	52	10
25	.....	.....	54	18	57	24	59	21	59	10	49	8	66	23	56	13	53	5	50	15	50	20	41	10	51	33	51	12
26	.....	.....	43	30	53	28	47	18	53	19	45	4	68	24	46	13	52	12	55	20	57	23	43	17	47	32	50	17
27	.....	.....	39	15	48	33	37	17	46	14	32	−8	55	24	46	8	44	7	53	15	51	21	47	15	44	28	41	11
28	.....	.....	31	2	41	15	40	4	43	9	37	−5	47	29	52	9	37	−1	48	10	49	18	33	−1	34	23	42	14
29	.....	.....	41	4	50	15	35	14	50	11	40	−3	49	14	52	8	46	−1	50	15	55	19	36	−4	44	28	46	10
30	.....	.....	40	14	52	19	57	18	49	8	44	−2	59	14	53	6	49	15	53	8	55	17	40	−1	47	34	52	6
Mns.	.....	.....	47.3	21.7	52.3	25.2	50.6	21.3	54.7	20.3	46.2	12.8	62.4	31.2	53.7	16.9	53.0	13.9	54.2	24.8	54.4	25.3	47.0	16.2	46.9	30.1	50 5	20.6

*, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1911.

DISTRICT No. 11, CALIFORNIA.

Prof. ALEXANDER G. McADIE, District Editor.

GENERAL SUMMARY.

November, 1911, was dry and warm. In many ways the month resembled November, 1910. It was very different from November, 1909, which was one of the rainiest Novembers for many years. The current November resembled more an average October, in the large number of clear days with cool nights and warm afternoons. There were no disturbances of importance and the only rain and wind storm worth noting was that of the 9th–10th. During the last decade the pressure was uniformly high over the northern half of the Pacific slope, the resulting surface winds were north-northeast, and the usual foehn effects were noticed. Thus, on the afternoon of the 25th maximum temperatures exceeding 80° were reported at stations on the south and west slopes of the mountains. On the 26th a maximum temperature of 86° occurred at Los Angeles, 80° at San Diego, and 75° at San Francisco. At the last-named station the temperature was the highest for the last week of November recorded in a period of 37 years.

While the precipitation was not heavy enough to be of great good to the varied interests of the State, it was well distributed geographically. Unlike the condition which existed last year at this time, the deficiency in rainfall was not greatly felt, as owing to the heavy snow cover of the past winter and spring, there was a fairly good supply of water. The month closed with a period of dry, moderately warm weather, not altogether favorable for agriculture.

The month was generally considered to be a warm one because afternoon temperatures were quite high. On the other hand, night temperatures were somewhat lower than usual, and in determining the mean temperature these values materially lowered the general average.

The air movement was in the main the same as we find in a dry winter month. The surface winds were light and mostly from the north. These are dry winds and in certain portions of the year blow with a high velocity.

There was less fog and less cloudiness than usual.

TEMPERATURE.

The mean temperature for the State was 51.1°, or nearly normal. The following table gives the means and departures for each November from 1897 to 1911, inclusive:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	°F.	°F.		°F.	°F.
1897	50.8	−1.2	1905	52.8	+0.8
1898	51.6	−0.4	1906	52.6	+0.6
1899	52.1	+0.1	1907	52.7	+0.7
1900	54.7	+2.7	1908	52.9	+0.9
1901	54.9	+2.9	1909	50.7	−1.3
1902	50.8	−1.2	1910	52.8	+0.8
1903	55.2	+3.2	1911	51.1	−0.9
1904	53.4	+1.4			

The highest temperature recorded at any station was 97°, at San Jacinto on the 7th. This was 6° lower than the highest temperature recorded during November, 1910. The lowest temperature during the month was −8°, at Tamarack on the 11th. This was 7° lower than the lowest recorded during the preceding November. The highest monthly mean was 64.1°, at Los Angeles, whereas the highest monthly mean in November, 1910, was 70.5°, at Mammoth Tank. The lowest monthly mean was 28.9°, at Tamarack, and this was 4° cooler than during November, 1910, at the same station. These data show that although unusually high afternoon temperatures occurred frequently during the month, the low morning temperatures also were frequent and low enough to more than offset the warmth of the day hours.

PRECIPITATION.

The precipitation was less than one-third that of an average November.

The following table gives the average and departure from the normal for each November from 1897 to 1911, inclusive:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	Inches.	Inches.		Inches.	Inches.
1897	1.41	− 1.57	1905	2.26	−0.72
1898	.99	− 1.99	1906	1.92	−1.06
1899	3.82	+ .84	1907	.28	−2.70
1900	5.21	+ 2.23	1908	1.85	−1.13
1901	2.65	− .33	1909	4.52	+1.54
1902	3.61	+ .63	1910	1.91	−1.07
1903	5.03	+ 2.05	1911	1.00	−1.98
1904	1.44	− 1.54			

The greatest monthly rainfall was 7.53 inches, at Weitchpec; whereas during the preceding November at the same place the rainfall amounted to 18.74 inches. There was no rainfall during the month at 26 stations. Last year only 2 stations reported no rainfall. The greatest 24-hour rainfall was 3.22 inches, at Helen Mine, on the 10th.

Snowfall.—There were 36.5 inches of snow during the month at Tamarack, 20 inches at Summit, and 26 inches at Fordyce Dam. At the close of the month there remained on the ground at Summit 2 inches, whereas at the end of November, 1910, there were 7 inches on the ground.

SUNSHINE.

The following table gives the total hours of sunshine and percentage of the possible:

Station.	Hours.	Percentage of possible.	Station.	Hours.	Percentage of possible.
Eureka	111	37	Sacramento	210	70
Fresno	281	92	San Diego	248	79
Los Angeles	259	83	San Francisco	212	70
Mount Tamalpais	224	74	San Jose	275	90
Red Bluff	220	74	San Luis Obispo	237	76

NOTES ON THE RIVERS OF THE SACRAMENTO AND SAN JOAQUIN WATERSHEDS DURING NOVEMBER, 1911.

By N. R. TAYLOR, Local Forecaster.

Sacramento watershed.—The average stages of all streams in this watershed showed little departure from those of the preceding month. There was a marked deficiency in rainfall, not only in the Great Valley, but in the higher regions of the Sierras as well.

At Red Bluff the river was 1.2 feet below the normal of the month, and the average stage at this station was the lowest of any November during the past 12 years, except in 1905 and 1907. From Tehama to Walnut Grove the Sacramento was the lowest recorded during any November, and the same is true of the Feather at Oroville, and the American at Fair Oaks and Folsom.

A new special river station has been established on the Bear River at the Pacific Gas & Electric Co.'s plant near Colfax. Reports will be furnished the Sacramento office during high-water periods.

San Joaquin watershed.—In the upper reaches of the San Joaquin and in the Cosumnes and Mokelumne Rivers there was little departure from the extreme low stages which have prevailed in these watersheds since about September 15. In all other streams in the drainage basin of the San Joaquin there was a slight increase in the run-off over that of the preceding month.

Rather more rain fell in this watershed than in that of the Sacramento, but the precipitation was generally deficient, and in no case was the normal stage for the month approached.

TABLE 1.—*Climatological data for November, 1911. District No. 11, California.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Oregon.																				
Klamath Agency	Klamath	4,189	3	27.6	.....	70	3	−1	11	54	3.30	.....	1.50	17.0	7	15	5	10	nw.	Edson C. Watson.
Klamath Falls	do	4,100	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Helleman.
Merrill	do	4,070	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Agnes Ritchson.
Yonna	do	4,146	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jacob Ruecke.
California.																				
Alameda	Alameda	19	1	50.4	.....	69	6	30	24	31	6.35	.....	0.25	0	2	14	12	4	w.	Chas. E. Sears.
Alturas	Modoc	4,460	7	37.4	.....	68	2†	4	11	54	0.62	.....	0.26	0.5	8	14	8	7	w.	Prof. C. B. Towle.
Angiola	Tulare	208	11	55.8	+ 1.7	80	8†	29	22	43	0.00	− 0.65	0.00	0	0	29	0	1	w.	Santa Fe Co.
Antioch **	Contra Costa	46	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Aptos **	Santa Cruz	102	26	51.4	− 1.6	72	2	28	24	....	0.58	− 2.61	0.58	0	1	26	1	3	nw.	Do.
Arrowhead Springs	San Bernardino	2,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. E. Soegaard.
Auburn	Placer	1,360	40	53.8	− 1.2	81	4	28	11	39	1.26	− 2.67	0.87	0	3	22	1	7	se.	Southern Pacific Co
Avalon	Los Angeles	30	1	63.0	.....	82	19†	48	29	25	0.14	.....	0.10	0	2	25	4	1	n.	T. S. Manning.
Azusa	do	540	9	60.8	.....	90	19†	35	23	51	0.41	− 1.27	0.41	0	1	26	3	1	.....	A. P. Griffith.
Bagdad	San Bernardino	784	8	62.1	.....	80	4	33	29†	31	0.00	.....	0.00	0	0	.....	.....	.....	.....	Santa Fe Co.
Bakersfield	Kern	404	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Barstow	San Bernardino	2,105	8	53.9	.....	81	5	20	29	45	0.00	− 0.33	0.00	0	0	28	0	2	w.	E. L. White.
Berkeley	Alameda	317	24	54.0	− 0.6	71	2†	36	11	25	0.46	− 2.34	0.36	0	3	24	4	2	ne.	State University.
Biggs **	Butte	98	12	53.6	+ 0.9	72	8	30	11†	....	0.10	− 2.50	0.10	0	1	18	0	12	s.	Southern Pacific Co.
Bishop	Inyo	4,450	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Chalfant.
Bishop Creek	do	8,500	1	35.7	.....	53	8	5	11	30	1.00	.....	1.00	10.0	1	29	0	1	.....	Paul E. Lodge.
Blocksburg	Humboldt	1,700	5	47.9	.....	80	1	24	11	37	3.08	.....	1.21	1.0	8	4	14	12	nw.	Victor Hope.
Blue Canon	Placer	4,695	12	48.0	+ 2.7	71	4†	15	11	30	4.10	− 3.91	2.00	1.0	5	21	4	5	.....	Southern Pacific Co.
Blythe	Riverside	268	2	54.8	.....	87	2	17	29	55	0.00	.....	0.00	0	0	28	1	1	ne.	Ray W. Ward.
Branscomb	Mendocino	2,000	11	49.2	.....	79	2	25	11	41	5.84	− 9.13	1.95	T.	5	19	7	4	n.	A. J. Haun.
Brawley	Imperial	−105	2	59.8	.....	84	4†	26	29	48	0.00	.....	0.00	0	0	.....	.....	.....	.....	M. D. Witter.
Brush Creek	Butte	2,140	7	47.8	.....	76	6	30	20†	44	0.27	.....	0.20	0	2	17	0	13	s.	Cal. Gas & Elec. Co.
Burney	Shasta	3,300	1	39.1	.....	68	2	12	30	49	0.80	.....	0.45	0	3	12	9	9	sw.	Mrs. M. D. Chambers.
Calexico	Imperial	0	6	58.8	.....	83	7	28	28	40	0.00	.....	0.00	0	0	30	0	0	nw.	J. E. Peck.
Caliente **	Kern	1,290	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Calistoga **	Napa	363	39	49.6	− 3.8	85	9	22	23†	....	0.95	− 2.84	0.91	0	2	25	0	5	.....	Do.
Campbell	Santa Clara	217	14	51.6	− 1.7	76	3	26	14	40	0.20	− 1.38	0.17	0	2	24	6	0	nw.	F. M. Righter.
Camptonville (near)	Yuba	3,500	4	51.6	.....	78	3†	22	11	38	4.67	.....	2.85	0	3	18	8	4	ne.	Cal. Gas & Elec. Co.
Cedarville	Modoc	4,675	17	37.0	− 1.9	63	3	13	12	37	0.97	− 1.11	0.50	6.5	6	17	13	0	sw.	T. H. Johnstone.
Chico	Butte	189	41	52.8	− 1.0	82	1†	26	11	46	0.10	− 2.46	0.10	0	1	20	2	8	n.	G. H. Stephenson.
China Flat	Humboldt	600	2	47.2	.....	70	5	24	30	36	3.06	.....	0.87	0	7	13	7	10	nw.	O. I. Westerburg.
Chino **	San Bernardino	714	19	57.5	+ 0.7	89	19	38	23†	....	0.23	− 0.44	0.23	0	1	27	0	3	e.	Southern Pacific Co.
Cisco **	Placer	5,939	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Claremont	Los Angeles	1,200	19	58.8	+ 1.5	87	25†	32	29	50	0.44	− 1.52	0.44	0	1	24	2	4	w.	F. P. Brackett.
Cloverdale	Sonoma	340	8	55.2	.....	83	3	32	17	43	1.07	.....	0.55	0	5	24	3	3	n.	John O. Ogle.
Colfax	Placer	2,421	40	49.2	− 2.5	72	3†	23	11	36	2.17	− 2.76	1.52	0	4	20	1	9	s.	Southern Pacific Co.
Colusa	Colusa	60	8	50.8	.....	77	1	28	11	43	T.	− 1.84	T.	0	0	26	2	2	n.	C. D. McCormish.
Corning **	Tehama	277	25	59.0	+ 3.9	79	4	32	11	....	0.10	− 2.12	0.10	0	1	13	13	4	n.	Southern Pacific Co.
Cuyamaca	San Diego	4,677	12	43.9	− 0.8	63	6†	26	19†	35	0.26	− 4.15	0.20	0	3	18	8	4	e.	L. L. Macquarie.
Daunt	Tulare	4,000	4	49.0	.....	77	19	27	11†	41	3.18	.....	3.18	0	1	26	0	4	.....	D. L. Wishon.
Davisville	Yolo	51	39	50.4	− 5.3	80	3	22	11†	48	0.12	− 1.64	0.08	0	2	16	13	1	n.	S. H. Beckett.
Deer Creek	Nevada	3,700	4	43.5	.....	69	3	16	11	39	4.71	.....	2.97	0	4	20	4	6	w.	Cal. Gas & Elec. Co.
Del Monte	Monterey	25	...	56.1	.....	76	2†	35	24	36	0.50	.....	0.50	0	1	23	0	7	w.	H. R. Warner.
Delta	Shasta	1,138	26	54.3	+ 3.2	85	8	24	10	47	2.00	− 5.05	1.00	0	2	20	0	10	s.	Southern Pacific Co.
Denair	Stanislaus	126	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Dobbins	Yuba	1,650	7	55.2	.....	84	26	30	11	36	1.76	.....	1.02	0	3	9	16	5	s.	Cal. Gas & Elec. Co.
Dudleys	Mariposa	3,000	2	45.0	.....	70	2†	21	11	43	2.26	.....	1.73	0	4	23	1	6	nw.	W. H. Dudley.
Dunnigan **	Yolo	68	34	60.0	+ 5.0	75	1†	38	24	....	0.08	− 1.99	0.08	0	1	26	0	4	n.	Southern Pacific Co.
Dunsmuir **	Siskiyou	2,285	22	44.2	− 0.7	72	3	26	28	....	1.90	− 4.59	0.93	0.5	5	15	6	9	n.	Do.
Durham	Butte	160	16	51.4	+ 0.4	81	4	22	12	44	0.10	− 2.85	0.10	0	1	22	3	5	n.	R. W. Durham.
El Cajon	San Diego	482	12	59.5	− 0.6	93	19	26	30	54	0.00	− 1.39	0.00	0	0	25	4	1	sw.	H. H. Kessler.
Electra	Amador	725	7	50.8	.....	72	2†	32	11†	32	1.75	.....	1.35	0	3	21	6	3	.....	Cal. Gas & Elec. Co.
Elsinore	Riverside	1,234	16	55.6	− 3.6	84	19	23	24	54	0.20	− 1.54	0.20	0	1	26	4	0	w.	A. F. Schult.
Emigrant Gap	Placer	5,230	37	45.2	+ 2.2	76	17	17	10	42	3.27	− 1.26	2.02	5.0	5	19	2	9	.....	Southern Pacific Co.
Escondido	San Diego	657	17	58.8	+ 3.7	90	19	23	30	58	0.10	− 1.34	0.10	0	1	1	29	0	w.	A. R. Moon.
Eureka	Humboldt	64	25	48.6	− 2.4	64	2	32	11	21	2.09	− 3.23	0.72	0	10	5	14	11	n.	U. S. Weather Bureau.
Farmington **	San Joaquin	111	32	52.7	− 2.0	75	6	28	12	....	0.18	− 1.53	0.18	0	1	26	3	1	se.	Southern Pacific Co.
Folsom	Sacramento	252	39	52.6	− 3.0	77	2†	31	22	36	0.68	− 2.09	0.38	0	3	24	3	3	n.	F. O. Hutton.
Fordyce Dam	Nevada	6,500	16	33.8	.....	57	6	10	11	34	3.72	− 3.59	1.20	26.0	6	17	8	5	sw.	E. E. Roening.
Fouts Springs	Colusa	1,650	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. J. Burgi.
Fresno	Fresno	293	24	53.4	− 1.2	77	4	31	11	35	0.17	− 1.00	0.17	0	1	20	10	0	e.	U. S. Weather Bureau.
Fruto **	Glenn	624	22	53.2	− 2.9	82	3	30	11	....	0.00	− 1.92	0.00	0	0	26	0	4	n.	Southern Pacific Co.
Galt **	Sacramento	49	33	52.6	− 1.4	77	2	33	11†	....	0.33	− 1.62	0.23	0	2	23	4	3	w.	Do.
Georgetown	El Dorado	2,650	38	52.2	− 3.2	74	2	23	11	31	3.48	− 2.83	2.25	0	5	23	0	7	se.	H. D. Jerrett.
Gilroy **	Santa Clara	193	37	48.2	− 4.6	75	3†	30	22†	....	0.64	− 1.58	0.61	0	2	25	0	5	ne.	Southern Pacific.
Gilta	Siskiyou	3,300	1	43.4	.....	71	3	18	11	30	3.52	.....	1.61	5.0	7	20	3	7	s.	A. Dannenbrink.
Glennville	Kern	5,500	1	47.2	.....	70	20	26	11	32	0.79	.....	0.79	T.	1	22	4	4	w.	C. H. Likely.
Gold Run	Placer	3,322	12	52.3	+ 0.5	75	2	24	11	29	3.55	− 2.70	1.90	0	5	15	9	6	n.	Southern Pacific Co.
Gonzales **	Monterey	127	12	51.2	− 0.5	77	19	40	3†	....	0.20	− 1.42	0.20	0	1	16	0	14	n.	Do.
Grass Valley	Nevada	2,690	39	49.4	.....	74	27	19	11	34	3.33	− 2.25	1.99	T.	4	18	10	2	sw.	F. R. Hull.
Greenville	Plumas	3,600	17	40.1	− 0.5	71	3	13	11†	52	1.54	− 3.10	1.10	T.	3	19	4	7	sw.	C. H. Higbie.
Groveland	Tuolumne	2,828	2	47.9	.....	70	20	23	12	36	2.02	.....	1.72	0	3	23	7	0	.....	H. S. Richardson.
Guinda **	Yolo	350	13	50.5	− 3.4	74	1	30	11	....	0.33	− 1.88	0.33	0	1	14	14	2	.....	Southern Pacific Co.
Hanford	Kings	249	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Healdsburg	Sonoma	110	18	53.8	− 0.2	87	2	28	23	47	0.71	− 3.90	0.57	0	2	22	2	6	n.	F. J. Kinley.
Hearst	Mendocino	1,800	1	50.0	.....	86	1	26	30	52	2.70	.....	1.10	0	4	18	7	5	nw.	H. D. Ellmaker.
Heber	Imperial	−20	5	59.4	.....	85	7	24	29	46	0.00	.....	0.00	0	0	23	7	0	nw.	C. J. Booth.
Hetch Hetchy	Tuolumne	3,665	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. W. Brown.
Hollister	San Benito	284	37	51.8	− 2.7	79	3	26	23	44	0.29	− 1.19	0.20	0	2	19	10	1	w.	J. N. Thompson.
Hornbrook **	Siskiyou	2,154	23	35.9	− 6.8	50	7†	22	28	....	0.30	− 2.21	0.30	3.0	1	23	2	5	.....	Southern Pacific Co.
Hot Springs	Tulare	3,300	4	47.5	.....	70	20	27	11	32	0.70	.....	0.70	0	1	26	1	3	.....	U. S. Forest Service.
Hullville (near)	Lake	2,250	4	50.2	.....	81	3	23	11†	42	3.43	.....	1.80	0	4	7	18	5	nw.	T. H. Betterton.
Idyllwild	Riverside	5,250	10	45.9	− 1.2	71	19†	22	27†	45	0.15	− 2.42	0.15	0	1	28	1	1	e.	Earl Powers.
Independence	Inyo	3,907	15	45.4	− 3.8	72	6	20	29	39	0.10	− 0.01	0.10	0	1	22	7	1	nw.	U. S. Weather Bureau.
Indio	Riverside	−20	33	61.8	− 0.8	89	4	23	30	50	0.00	− 0.19	0.00	0	0	23	7	0	nw.	F. N. Johnson.
Inskip	Butte	4,975	4	46.4	.....	68	3	16	11	30	2.67	.....	1.52	1.0	3	11	12	7	.....	Cal. Gas & Elec. Co.
Ione **	Amador	287	33	50.9	− 2.5	74	1†	28	11	....	0.80	− 1.36	0.60	0	2	21	0	9	sw.	Southern Pacific Co.
Jamestown	Tuolumne	1,471	8	51.0	.....	78	1	26	23	48	0.90	.....	0.75	0	2	19	0	11	.....	Sierra Railway Co.
King City	Monterey	333	24	57.8	+ 4.0	84	2	27	30	51	0.00	− 1.46	0.00	0	0	28	0	2	.....	Southern Pacific Co.

TABLE 1.—*Climatological data for November, 1911. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Continued.																			
Lake Eleanor	Tuolumne	4,700	1	43.2	.....	68	7†	14	11	42	2.67	.....	2.05	1.5	5	23	1	6	sw.	O. J. Todd.
La Porte	Plumas	5,900	17	42.2	+ 2.6	77	5	4	11	53	5.95	— 4.65	2.35	2.0	5	22	1	7	n.	Chas. W. Hendel.
Le Grand	Merced	255	11	53.8	+ 0.2	80	3†	30	12†	33	0.17	— 1.80	0.17	0	1	29	0	1	n.	Santa Fe Co.
Lemon Cove	Tulare	600	16	52.0	— 3.6	79	3	29	30	44	0.76	— 0.80	0.76	0	1	22	5	3	w.	G. W. Sandidge.
Lick Observatory	Santa Clara	4,209	22	48.6	— 0.8	65	30	24	11	19	1.21	— 1.74	0.74	0	5	17	8	5	ne.	The Director.
Livermore	Alameda	485	40	54.8	— 0.1	83	6	27	23†	47	0.29	— 1.47	0.28	0	2	24	4	2	n.	E. G. Still.
Lodi	San Joaquin	45	29	48.5	— 5.1	72	5†	25	22	38	0.19	— 2.39	0.17	0	2	23	6	1	w.	Ezra Fiske.
Lone Pine	Inyo	2,728	6	45.1	.....	72	4	17	23	44	0.02	.....	0.02	0	1	28	2	0	s.	G. F. Marsh.
Long Valley	Lassen	4,400	2	36.6	.....	59	2†	14	27	37	1.00	.....	1.00	0	2	11	11	8	sw.	A. G. Evans.
Los Angeles	Los Angeles	293	34	64.1	+ 5.7	86	19	47	23	31	0.10	— 1.28	0.10	0	1	20	7	3	ne.	U. S. Weather Bureau.
Los Banos **	Merced	121	24	54.7	+ 0.3	76	2	38	25†	....	0.00	— 1.09	0.00	0	0	27	0	3	.....	Southern Pacific Co.
Los Gatos	Santa Clara	600	24	55.0	+ 0.7	77	3	32	11	30	0.70	— 3.16	0.65	0	3	24	2	4	n.	F. H. McCullagh.
McCloud	Siskiyou	3,410	1	40.8	.....	68	3	15	11	41	1.18	.....	0.53	2.0	4	17	10	3	s.	F. F. Spencer.
Macdoel	do	4,258	4	34.8	.....	68	3	9	12	47	1.30	.....	0.90	4.0	3	19	0	11	nw.	Butte Valley L. Co.
Madeline	Lassen	5,270	2	35.8	.....	65	3	5	11	54	0.24	.....	0.20	2.0	2	18	8	4	n.	J. H. Williams.
Magalia	Butte	2,321	7	52.2	.....	80	5	24	16	42	2.15	.....	1.38	0	3	21	4	5	se.	Butte Co. R. R. Co.
Mammoth Tank	Imperial	257	33	62.8	— 1.0	84	4†	30	29	38	0.00	— 0.14	0.00	0	0	25	1	4	w.	Southern Pacific Co.
Marysville	Yuba	67	40	52.6	— 3.8	79	5	27	13	46	0.15	— 1.89	0.15	0	1	20	0	10	s.	Do.
Mecca	Riverside	−185	5	60.8	.....	90	3	21	29	53	0.00	.....	0.00	0	0	23	7	0	e.	E. A. Palmer.
Menlo Park **	San Mateo	64	33	51.1	— 2.1	70	25	32	11†	....	0.15	— 1.65	0.14	0	2	28	0	2	.....	Southern Pacific Co.
Merced	Merced	173	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Mill Creek (1)	Amador	.....	4	47.0	.....	72	26	24	11	39	2.80	.....	1.94	0	4	22	3	5	n.	Cal. Gas & Elec. Co.
Milton (near)	Calaveras	680	20	54.6	— 1.7	74	3†	31	11	24	0.51	— 1.79	0.44	0	3	21	7	2	nw.	J. H. Southwick.
Modesto **	Stanislaus	90	39	51.1	— 4.7	68	1	33	11	....	0.05	— 1.38	0.05	0	1	28	1	1	.....	Southern Pacific Co.
Mojave	Kern	2,751	34	43.2	—11.6	74	2	20	12	36	0.00	— 0.40	0.00	0	0	27	0	3	.....	Do.
Mokolumne Hill	Calaveras	1,550	18	54.2	+ 4.0	74	3	29	12	28	1.95	— 1.87	1.32	0	3	19	6	5	.....	C. E. Prindle.
Mono Ranch	Ventura	3,210	5	46.8	.....	71	18	25	24†	42	T.	.....	T.	0	0	25	3	2	w.	Herbert Lathrop.
Montague	Siskiyou	2,450	23	40.0	— 5.7	70	1	15	30	42	1.27	— 0.01	0.45	0	3	19	6	14	n.	I. E. Deboy.
Monterey **	Monterey	15	46	51.0	— 3.3	64	5†	32	24	....	0.75	— 0.79	0.75	0	1	27	3	0	e.	Southern Pacific Co.
Monterio	Kern	4,500	12	48.9	— 7.6	72	2†	24	11	36	0.20	— 1.65	0.20	0	1	18	9	3	nw.	John C. Knecht.
Mount Tamalpais	Marin	2,375	12	52.8	+ 2.2	69	3	29	11	18	1.49	— 3.93	1.07	0	5	21	4	5	ne.	U. S. Weather Bureau.
Napa City	Napa	20	34	50.7	— 1.1	81	4	24	23	45	1.12	— 1.76	0.70	0	3	12	18	0	s.	Alex. Hull.
Napa (S. H.)	do	60	33	52.4	+ 0.6	77	2†	32	23	37	0.75	— 1.97	0.61	0	2	20	7	3	sw.	W. H. Martin.
Needles	San Bernardino	477	19	59.8	— 0.3	79	16	30	30	35	0.00	— 0.24	0.00	0	0	29	0	1	s.	Santa Fe Co.
Nellie	San Diego	5,350	2	47.0	.....	67	7†	28	12†	37	0.60	.....	0.60	0	1	.....	.....	.....	.....	T. O. Bailey.
Nevada City	Nevada	2,580	19	48.6	+ 1.6	82	20	18	11	53	2.11	— 4.76	1.32	T.	4	24	4	2	sw.	S. W. Marsh.
Newcastle	Placer	970	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. D. Kellogg.
Newhall **	Los Angeles	1,200	34	50.6	— 4.2	82	4†	32	10†	....	0.00	— 1.56	0.00	0	0	27	0	3	ne.	Southern Pacific Co.
Newman	Stanislaus	91	22	56.2	— 0.9	75	6	40	12†	25	0.10	— 1.21	0.10	0	1	.....	.....	.....	.....	E. S. Wangenheim.
Nimshew	Butte	2,500	7	49.2	.....	74	3	21	11	36	1.85	.....	0.93	0	3	22	3	5	.....	Cal. Gas & Elec. Co.
North Bloomfield	Nevada	3,200	14	50.9	+ 1.9	71	3	27	10	28	2.75	— 3.80	1.95	0	2	22	6	2	n.	J. R. McIntosh.
North Fork	Madera	3,000	7	49.4	.....	75	21	24	11	43	1.51	.....	1.00	0	3	17	11	2	w.	U. S. Forest Service.
Oakdale **	Stanislaus	156	17	50.6	— 2.3	74	3†	32	11†	....	0.11	— 1.89	0.10	0	2	25	4	1	nw.	Southern Pacific Co.
Oak Grove	San Diego	.....	1	54.6	.....	78	6	28	29	49	0.02	.....	0.02	0	1	20	9	1	e.	U. S. Forest Service.
Oakland	Alameda	36	35	53.3	— 0.5	70	2	38	11	24	0.35	— 2.68	0.22	0	4	23	6	1	nw.	Cabot Observatory.
Oceanside	San Diego	.....	1	60.8	.....	84	25	41	28	36	0.07	.....	0.07	0	1	23	5	2	w.	H. D. Brodie.
Ojai Valley	Ventura	900	5	57.6	.....	92	19†	28	29	57	0.05	.....	0.05	0	1	28	0	2	sw.	W. H. Duncan.
Orland	Glenn	254	29	55.0	— 1.4	84	3	28	10	43	0.03	— 2.05	0.03	0	1	23	2	5	n.	U. S. Reclamation Service.
Orleans	Humboldt	520	8	51.6	.....	82	2†	30	22	46	4.08	.....	1.10	0	10	18	0	12	.....	F. T. Hale.
Oroville (near)	Butte	250	27	53.8	— 3.3	80	26	29	11	38	0.55	— 3.19	0.55	0	1	14	12	4	s.	E. D. Fairchild.
Palermo	do	213	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Western Pacific Co.
Palm Springs	Riverside	584	22	60.3	— 4.8	80	16	35	29	....	0.00	— 0.29	0.00	0	0	24	1	5	w.	Southern Pacific Co.
Pasadena	Los Angeles	827	21	58.6	— 0.5	89	19†	32	29	50	0.08	— 0.32	0.08	0	1	29	0	1	sw.	E. D. Sorver.
Paso Robles	San Luis Obispo	800	24	50.0	— 1.6	83	4	18	23†	58	0.12	— 1.31	0.06	0	2	24	4	2	nw.	Dr. F. W. Sawyer.
Peachland	Sonoma	190	15	52.2	— 0.2	85	3	27	12†	51	1.75	— 2.94	1.11	0	4	25	3	2	sw.	E. H. Parnell.
Penstock Camp	Tuolumne	3,750	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tuolumne Water Power Co.
Placerville	El Dorado	1,875	22	46.4	— 1.7	70	2	24	11	36	1.79	— 3.42	1.17	0	3	.....	.....	.....	.....	A. Baring-Gould.
Point Lobos	San Francisco	250	18	55.8	+ 2.0	73	2†	45	11†	21	0.62	— 1.94	0.47	0	3	20	5	5	nw	John Hyslop.
Point Reyes	Marin	490	19	54.6	+ 1.6	73	26	43	11	22	0.49	— 2.91	0.21	0	5	18	8	4	nw.	U. S. Weather Bureau.
Porterville	Tulare	464	22	59.9	+ 5.0	95	10	29	23	55	0.28	— 0.52	0.28	0	1	23	2	5	.....	Leslie McAuliff.
Quincy	Plumas	3,400	16	38.3	— 2.8	70	15	14	23†	48	1.70	— 4.04	1.00	0	3	24	1	5	sw.	U. S. Forest Service.
Red Bluff	Tehama	307	34	54.6	+ 1.2	84	3	30	11	38	0.13	— 2.97	0.08	0	2	21	4	5	nw.	U. S. Weather Bureau.
Redding	Shasta	552	35	57.0	+ 2.9	85	3	26	11	37	1.02	— 2.77	0.51	0	4	19	8	3	n.	L. F. Bassett.
Redlands	San Bernardino	1,352	18	57.1	— 1.8	83	19	31	29	47	0.34	— 0.60	0.34	0	1	22	4	5	w.	P. W. Moore.
Reedley	Fresno	347	11	51.0	— 4.1	76	4†	30	11†	42	0.32	— 0.53	0.32	0	1	21	4	4	n.	Santa Fe Co.
Rialto (near)	San Bernardino	2,250	5	60.0	.....	78	6†	39	11	24	0.46	.....	0.32	0	4	20	6	4	n.	So. Cal. Edison Co.
Riverside	Riverside	851	29	58.6	+ 0.4	89	19	27	29	54	0.00	— 0.76	0.00	0	0	22	5	3	n.	J. H. Cox.
Rocklin	Placer	249	40	59.2	+ 5.3	88	30	30	16	46	0.35	— 1.94	0.20	0	2	24	0	6	ne.	Southern Pacific Co.
Rohnerville	Humboldt	75	8	49.8	.....	71	2	30	11	31	2.95	.....	0.82	0	8	15	5	10	n.	Dr. R. Callahan.
Sacramento (1)	Sacramento	71	34	53.9	+ 0.5	77	3	31	11	35	0.15	— 2.00	0.13	0	2	22	6	2	se.	U. S. Weather Bureau.
Sacramento (2)	do	35	58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. H. Gerrish.
St. Helena	Napa	155	3	54.4	.....	84	1†	28	11†	48	1.26	.....	1.04	0.	2	25	3	2	nw.	Frank Kettlewell.
Salinas	Monterey	40	37	54.2	+ 1.1	78	2†	31	11	39	0.19	— 2.27	0.19	0	1	28	0	2	w.	Miss E. Ruth Abbott.
San Bernardino	San Bernardino	1,054	19	56.8	— 0.6	85	25	27	29	52	0.58	— 0.87	0.30	0	2	24	2	4	n.	Dr. A. K. Johnson.
San Diego	San Diego	93	40	61.7	+ 2.7	82	24	44	29	33	0.02	— 0.76	0.02	0	1	22	7	1	ne.	U. S. Weather Bureau.
San Francisco	San Francisco	207	40	57.3	+ 1.8	77	3	42	11	26	0.60	— 2.08	0.45	0	5	19	9	2	nw.	Do.
San Jacinto	Riverside	1,550	18	57.8	+ 1.7	97	7	25	29	58	0.00	— 1.38	0.00	0	0	20	9	1	w.	E. T. Tanner.
San Jose	Santa Clara	95	26	51.6	— 2.8	78	3	29	24	40	0.18	— 1.82	0.15	0	2	25	4	1	nw.	U. S. Weather Bureau.
San Leandro	Alameda	48	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frank Jones.
San Luis Obispo	San Luis Obispo	201	16	58.0	+ 1.7	83	2	34	29	38	0.46	— 1.55	0.46	0	1	19	7	4	n.	U. S. Weather Bureau.
San Mateo **	San Mateo	22	37	51.3	— 2.5	73	2	37	12	....	1.05	— 1.44	0.60	0	2	23	0	7	w.	Southern Pacific Co.
San Miguel **	San Luis Obispo	616	24	53.4	— 0.3	78	3	24	24	....	0.07	— 1.04	0.07	0	1	21	6	3	.....	Do.
San Miguel Island	Santa Barbara	500	17	59.2	.....	76	27	45	11	21	0.20	— 0.75	0.20	0	1	20	0	10	nw.	Capt. W. G. Waters.
Sanger **	Fresno	371	22	.....	.....	.....	.....	.....	.....	.....	0.00	— 1.14	0.00	0	0	.....	.....	.....	.....	Southern Pacific Co.
Santa Barbara	Santa Barbara	130	27	59.2	+ 0.1	87	19	40	30	40	0.02	— 1.59	0.02	0	1	25	2	3	w.	G. W. Russell.
Santa Clara	Santa Clara	90	22	52.4	— 1.5	81	2†	27	12	46	0.41	— 1.46	0.37	0	3	27	2	1	sw.	Santa Clara College.
Santa Cruz	Santa Cruz	20	38	53.2	— 2.3	77	2†	32	12	40	1.10	— 1.61	0.90	0	2	27	1	2	w.	W. R. Springer.
Santa Margarita **	San Luis Obispo	996	22	50.2	— 0.6	71	2	30	24	....	0.30	— 2.37	0.30	0	1	21	1	8	n.	Southern Pacific Co.
Santa Maria	Santa Barbara	220	23	55.4	— 2.4	82	19	32	11	40	0.00	— 1.27	0.00	0	0	29	0	1	w.	Edwin Morris.
Santa Monica	Los Angeles	110	26	60.0	— 0.2	80	19†	40	23	33	0.00	— 2.00	0.00	0	0	25	1	4	w.	N. D. Ingham.
Santa Rosa	Sonoma	182	22	51.8	— 2.1	84	3	25	22	51	0.72	— 2.30	0.45	0	4	16	11	3	sw.	M. L. McDonald, jr.
Selma **	Fresno	311	25	51.6	— 3.0	70	2†	36	22†	....	0.41	— 0.47	0.39	0	2	24	0	6	nw.	Southern Pacific Co.
Seven Oaks	San Bernardino	5,000	1	46.5	.....	71	19	23	28	39	0.52	.....	0.52	0	1	23	6	1	w.	M. Lewis.
Shasta	Shasta	1,048	15	53.4	+ 0.4	90	28	21	11	61	0.76	— 5.48	0.76	0	1	29	0	1	nw.	Dr. T. J. Edgecomb.
Sierra Madre	Los Angeles	1,400	14	60.4	— 0.8	81	19	42	21†	29	0.18	— 1.73	0.18	0	1	21	2	7	.....	Mrs. A. C. Gregory.
Sierraville	Sierra	5,000	1	37.8	.....	67	3†	9	11	51	1.87	.....	1.40	1.0	4	21	2	7	sw.	C. D. Johnson.

TABLE 1.—*Climatological data for November, 1911. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Continued.																				
Sisson	Siskiyou	3,555	22	39.4	− 1.7	65	5†	18	22	35	1.19	− 2.80	0.62	0.5	5	17	13	0	n.	Southern Pacific Co.
Soledad **	Monterey	188	37	58.2	+ 5.0	77	12	40	26	....	0.00	− 1.09	0.00	0	0	24	4	2	n.	Do.
Southeast Farallon	San Francisco	30	8	53.6	.....	64	27	46	11	11	0.30	.....	0.16	0	4	20	7	3	nw.	U. S. Weather Bureau.
Sonora	Tuolumne	1,825	23	49.2	.....	69	2†	29	11	30	1.50	− 2.41	1.33	0	3	25	1	4	nw.	Chas. P. Jones.
Squirrel Inn	San Bernardino	5,280	1	43.2	.....	61	20	24	11	23	1.50	.....	1.05	0	2	25	2	3	n.	A. D. Frantz.
Stirling City	Butte	3,525	7	48.9	.....	80	27	19	11	48	2.70	.....	2.20	0.2	2	19	5	6	se.	Butte Co. R. R. Co.
Stockton (S. H.)	San Joaquin	23	40	51.9	− 2.0	84	2	29	12	42	0.18	− 1.58	0.18	0	1	24	6	0	nw.	State Hospital.
Storey	Madera	295	11	50.0	− 3.3	75	7	28	12	42	0.06	− 1.23	0.06	0	1	28	0	2	nw.	Santa Fe Co.
Suisun **	Solano	20	31	55.5	+ 0.7	78	4	32	22	....	0.50	− 1.81	0.35	0	2	27	0	3	w.	Southern Pacific Co.
Summerdale	Mariposa	5,270	15	47.0	+ 3.7	70	26	16	11	37	2.99	− 2.09	2.58	0	4	23	4	3	se.	Mrs. J. E. Lowry.
Summit	Placer	7,017	38	36.3	+ 0.5	56	3	8	11	31	2.02	− 2.50	1.00	20.0	4	24	0	6	sw.	Southern Pacific Co.
Susanville	Lassen	4,175	22	36.0	− 5.8	60	5	15	11	31	0.97	− 1.84	0.60	T.	4	18	10	2	sw.	James Branham.
Tamarack	Alpine	8,000	5	28.9	.....	54	6	− 8	11	39	3.65	.....	2.00	36.5	5	23	3	4	ne.	William Bennett.
Tehachapi **	Kern	3,964	34	48.5	+ 2.0	65	20	29	11	....	0.00	− 0.56	0.00	0	0	....	....	.....	.....	Southern Pacific Co.
Tehama **	Tehama	220	40	48.2	− 6.9	77	6	30	11	....	T.	− 2.33	T.	0	0	23	1	6	n.	Do.
Tejon Rancho	Kern	1,500	9	47.8	.....	67	4	29	11	29	0.02	.....	0.02	0	1	26	0	4	n.	S. E. Bailey.
Three Rivers	Tulare	870	1	51.4	.....	70	3	27	25	45	1.71	.....	1.69	0	2	23	5	2	sw.	E. D. Barton.
Towle	Placer	3,704	25	51.2	+ 2.2	83	19	19	11	49	3.75	− 2.71	2.00	0	4	22	4	4	s.	Southern Pacific Co.
Tracy **	San Joaquin	64	31	54.7	+ 0.7	71	4	39	28†	....	0.22	− 0.93	0.22	0	1	19	5	6	nw.	Do.
Ukiah	Mendocino	620	18	50.6	− 0.6	79	1	25	11†	45	1.34	− 2.56	0.65	0	4	19	7	4	nw.	Dr. Geo. McCowen.
Upland	San Bernardino	1,750	14	56.9	− 2.0	84	25	32	23	47	0.42	− 1.04	0.42	0	1	26	3	1	e.	A. P. Harwood.
Upper Lake	Lake	1,350	26	50.4	− 1.0	84	1†	23	30	50	0.96	− 1.82	0.56	0	4	22	4	4	nw.	C. M. Hammond.
Vacaville	Solano	175	23	54.3	− 1.4	89	2	26	23	50	0.52	− 2.56	0.46	0	2	23	5	2	n.	G. O. Coburn.
Valley Springs **	Calaveras	673	22	54.1	− 2.1	75	4	35	11	....	0.68	− 1.94	0.50	0	3	24	3	3	nw.	Southern Pacific Co.
Visalia	Tulare	334	23	49.8	− 2.2	79	3†	24	14	44	0.00	− 0.87	0.00	0	0	29	0	1	se.	Santa Fe Co.
Warner Springs	San Diego	3,165	3	54.5	.....	87	25	30	20†	49	0.08	.....	0.08	0	1	25	5	0	.....	Mrs. F. S. Sandford.
Wasco	Kern	336	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Watsonville	Santa Cruz	23	15	49.5	− 6.6	80	19†	24	17	54	0.50	− 3.32	0.43	0	2	18	9	3	w.	Spreckles Sugar Co.
Weitchpec	Humboldt	1,700	7	44.6	.....	71	3	22	11	35	7.53	.....	2.40	2.0	11	17	3	10	sw.	M. E. Lathrop.
Westley **	Stanislaus	90	1	51.5	− 5.5	71	2	31	22†	....	0.29	− 1.10	0.29	0	1	28	0	2	n.	Southern Pacific Co.
Wheatland	Yuba	84	22	50.6	− 2.4	75	2†	27	11	39	0.47	− 2.12	0.36	0	2	24	3	3	s.	Wm. Lumbard.
Willows	Glenn	136	24	53.8	− 1.0	82	3	27	11	37	0.05	− 1.81	0.05	0	1	17	3	10	n.	L. C. Stiles.
Yosemite	Mariposa	3,945	32	41.2	.....	74	2	17	22	51	2.13	.....	1.75	0	4	24	2	4	s.	J. P. Kelly.

a, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1911. District No. 11, California.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Oregon.																																
Klamath Agency	Klamath									*	1.50			.20		1.50																3.20
Klamath Falls	do																															
Long Valley	do						T.	.27		T.	.35	.47			.06	.36	.03															1.54
Merrill	Int. drainage																															
Yonna	do																															
California.																																
Abertine	Sacramento																															
Aguanga	Coast																															0.00
Alameda	do									.25				T.		.10																0.35
Alturas	Sacramento							.08	.04		.15	.01		T.	.01	.26	.05										.02					0.62
Angels Camp	San Joaquin						.41			1.12						.10																1.63
Angiola	do																															0.00
Antioch	do																															
Aptos	Coast										.58																					0.58
Arrowhead Springs	do																															
Auburn	Sacramento									.07	.87				T.		.32															1.26
Avalon	Ocean										.10	.04																				0.14
Azusa	Coast										.41																					0.41
Bagdad	Desert																															0.00
Bakersfield	San Joaquin																															
Barstow	Desert																															0.00
Bear River	San Joaquin																															
Bear Valley (1)	Sacramento									.15	2.00					1.20																3.35
Bear Valley (2)	San Joaquin										T.	.20																				0.20
Bear Valley Dam	Coast										.36																					0.36
Belotta	San Joaquin										.35																					0.35
Ben Lomond	Coast										1.39																					1.39
Berkeley	do									T.	.36			.02		.08																0.46
Biggs	Sacramento															.10																0.10
Bishop	Owens																															
Bishop Creek	do											1.00																				1.00
Blocksburg	Coast							T.	.35	.58	.47	.11	.20		.05	1.21	.11															3.08
Blue Canon	Sacramento									.57	2.00	.21				.07	1.25															4.10
Blythe	Desert																															0.00
Boulder Creek	Coast										1.25					T.																1.25
Bowmans Dam	Sacramento																															
Branscomb	Coast								.12	1.07	1.95			.83		1.87																5.89
Brush Creek	Sacramento										.20					.07																0.27
Burney	do									T.	.45		T.	.05		.30	T.															0.80
Butte Valley	do															2.34																2.34
Calexico	Desert																															0.00
Calistoga	Coast											.91				.04																0.95
Campbell	do									.17					.03																	0.20
Campo	do																															
Camptonville (near)	Sacramento								T.	.62	2.85					1.20																4.67
Cedarville	Mount'n Lakes							.04	.03	.15	.50	.03			T.	.22																0.97
Chester	Sacramento								.14	.88						.60																1.62
Chico	do								T.	T.	T.			T.		.10																0.10
Chico (near)	do								T.	T.						T.																T.
China Flat	Coast							T.	.05	.60	.87	.04		.55		.80	.15															3.06
Chino	do									.23																						0.23
Cisco	Sacramento																															
Claremont	Coast											.44																				0.44
Cloverdale	do									.07	.55			.08	.01	.36																1.07
Colfax	Sacramento									.26	1.52	T.				.04	.35															2.17
Colgate	do										1.10					.05	.60															1.75
Colusa	do									T.				T.	T.																	T.
Corning	do										.10																					0.10
Corona	Coast									.10																						0.10
Cuyamaca	do									.05	.20			.01																		0.26
Daunt	San Joaquin										3.18																					3.18
Davisville	Sacramento										.04					.08																0.12
Deer Creek	do									.48	2.97			T.		1.22	.04															4.71
Del Monte	Coast										.50			T.		T.																0.50
Delta	Sacramento									T.	1.00			1.00																		2.00
Denair	San Joaquin																															
Descanso	Coast																															0.00
Dinuba	San Joaquin										.43																					0.43
Dobbins	Sacramento									.04	1.02					.70	T.															1.76
Downieville	do								T.	.18	2.30	.02		T.		.83	.55															3.88
Dudleys	San Joaquin									.03	1.73					.12	.38															2.26
Dunnigan	Sacramento									.08																						0.08
Dunsmuir	do									.10	.93			.13		.60	.14															1.90
Durham	do									T.	T.					.10																0.10
Dyerville	Coast																															
East Park	Sacramento									.16																						0.16
Edgewood	Klamath								.08				.34			.13				.04												0.54
Edison	San Joaquin										.10																					0.10
El Cajon	Coast																															0.00
Electra	San Joaquin									.15	1.35						.25															1.75
Elsinore	Coast										.20																					0.20
Emigrant Gap	Sacramento								.40	2.02	.10				.35	.40																3.27
Escondido	Coast										.10																					0.10
Eureka	do							.04	.17	.52	.44		.27	.09	.08	.39	.08				.01											2.09
Fairmont	do										.04																					0.04
Farmington	San Joaquin										.18																					0.18
Felton	Coast										1.73																					1.73
Firebaugh	San Joaquin										.05																					0.05
Folsom	Sacramento									T.	.38				.02		.28															0.68
Fordyce Dam	do							T.	.05	.63	1.20			.12	T.	1.20	.52															3.72
Fort Bragg	Coast							.10	.19	.89		.25			.74	.10																2.27
Fort Ross	do																															
Fouts Springs	Sacramento																															
Fredalba	Coast										.40	.98																				1.38
Fresno	San Joaquin										.17					T.																0.17
Fruto	Sacramento																															0.00
Galt	San Joaquin										.23											.10										0.33
Georgetown	do									.44	2.25	.04				.03	.72															3.48

TABLE 2.—*Daily precipitation for November, 1911. District No. 11*—Continued.

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
***California*—Contd**																															
Gilroy	Coast									.61							.03														0.64
Gilta	do								.18	1.04	.14			.50	0.3	1.61	.32														3.52
Glendora	do										.52																				0.52
Glen Ranch	do											.08																			0.08
Glennville	San Joaquin										.79																				0.79
Glenwood	Coast									.92																					0.92
Gold Run	Sacramento									.40	1.90	.10				.05	1.10														3.55
Gonzales	Coast										.20																				0.20
Grass Valley	Sacramento									.61	1.99					.60	.13														3.33
Greenville	do									.06	1.10					.38															1.54
Gridley	do															.11															0.11
Groveland	San Joaquin								T.		1.72				.17	.13															2.02
Guinda	Sacramento										.33																				0.33
Hanford	San Joaquin																														
Head Dam	Sacramento									.43	2.50					1.05															3.98
Healdsburg	Coast								T.	.57	T.			.14																	0.71
Hearst	do									.60	1.10	.30				.70															2.70
Heber	Desert																														0.00
Helen Mine	Coast									.32	3.22			.22																	3.76
Hesperia	Desert																														
Hetch Hetchy	San Joaquin																														
Holcomb	Coast																														
Hollister	do										.30	.09																			0.39
Hornbrook	Klamath								.30	T.																					0.30
Hot Springs	San Joaquin										.70																				0.70
Hullville	Coast									.43	1.80			.40		.80															3.43
Idyllwild	do									.15																					0.15
Independence	Owens										.10																				0.10
Indio	Desert																														0.00
Inskip	Sacramento								T.	.33	1.52			T.		.18															2.67
Ione	San Joaquin										.60					.20															0.80
Jacksonville	do										.80	.72					.33														1.85
Jamestown	do										.75					.15															0.90
Jenny Lind	do										.40																				0.40
Jolon	Coast									T.	.13																				0.13
Julian	do											.40																			0.40
Kennedy Mine	San Joaquin																														‡1.32
Kennett	Sacramento										.98	T.		.05		.69															1.72
Kentfield	Coast									.06	1.58		.13			.14															1.86
Kernville	San Joaquin										.50																				0.50
King City	Coast																														0.00
Knights Landing	Sacramento										.02					.06															0.08
La Grange	San Joaquin								.77																						0.77
Lake Eleanor	do									.07	2.05	.13				.24	.18														2.67
Lakeside	Coast																														0.00
La Porte	Sacramento									1.10	2.35			1.00		1.41	.09														5.95
Lathrop	San Joaquin										.07																				0.07
Laurel	Coast										.95			T.			.10														1.05
Laytonville	do																														
Le Grand	San Joaquin										.17																				0.17
Lemon Cove	do										.76																				0.76
Lick Observatory	Coast								.04	.23	.74					.17	.03														1.26
Livermore	do									T.	.28			T.		.01															0.29
Lodi	Sacramento										.17			T.		.02															0.19
Lone Pine	Owens										.02																				0.02
Long Camp	San Joaquin																														
Long Valley	Mount'n Lakes										1.00					.10															1.10
Lordsburg	Coast																														
Los Alamos	do										.08																				0.08
Los Angeles	do										.10																				0.10
Los Banos	San Joaquin																														0.00
Los Gatos	Coast										.65			.03		.02															0.70
Los Molinos	Sacramento															.03															0.03
Low Observatory	Coast										.22																				0.22
McCloud	Sacramento							T.		.21	.53			.04		.40															1.18
Macdoel	Klamath										.20	.20				.90															1.30
Madeline	MountainLakes							.04	T.			.20	T.																		0.24
Magalia	Sacramento									1.38					.32	.45															2.15
Mammoth Tank	Desert																														0.00
Mariposa	San Joaquin										1.73	.04					.17														1.93
Marysville	Sacramento														.15																0.15
Mecca	Desert																														0.00
Melones	Sacramento						.01				T.	1.20																			1.21
Menlo Park	Coast										.14			.01																	0.15
Merced	San Joaquin																														
Merced Falls	do										.40	.25				T.															0.65
Mesa Grande	Coast										.11	.28																			0.39
Mill Creek (1)	San Joaquin									.16	1.94					.66	.04														2.80
Mill Creek (2)	Coast										.75																				0.75
Mills College	do									.02	.39			.02	.03	.14															0.60
Milo	San Joaquin										1.87																				1.87
Milton (near)	do								.02	.44						.05															0.51
Modesto	do										.05																				0.05
Mojave	Desert																														0.00
Mokolumne Hill	San Joaquin									.25	1.32					.38															1.95
Mono Ranch	Coast																														‡T.
Monroeville	San Joaquin																														
Montague	Klamath							T.	T.	.40	.45					.42															1.27
Monterey	Coast										.75																				0.75
Monterio	San Joaquin											.20																			0.20
Montgomery Creek	Sacramento											.95				.90	.10														1.95
Mount Tamalpais	Coast								.09	.78	.30			.11		.21															1.49
Mount St. Helena	do									2.00						.87															2.87
Napa City	do	.01								.32	.70																				1.12
Napa (S. H.)	do										.61			.14																	0.75
Needles	Desert																														0.00
Nellie	Coast										.60																				0.60
Nevada City	Sacramento									.19	1.32			T.		.07	.53														2.11
Newcastle	do																														
Newhall	Coast																														0.00

TABLE 2.—*Daily precipitation for November, 1911. District No. 11*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
California—Contd.																																
Newman	San Joaquin									.02	.10					.90																0.10
Nimshew	Sacramento									1.95	.93					.80																1.85
North Bloomfield	do										1.89		.35				.16															2.75
North Fork	San Joaquin								.02	1.12				.15		.14																1.51
North Lakeport	Coast									.01	.10																					1.43
Oakdale	San Joaquin										.02																					0.11
Oakgrove	Coast									.01	.22			.02		.10																0.02
Oakland	do											1.25																				0.35
Oakville	do								T.		.07			T.																		1.25
Oceanside	do										.05																					0.07
Ojai Valley	do									.03				T.	T.						.03											0.05
Orland	Sacramento						.11	.12	.34	1.10	.12		.04	.06	1.05	.51																0.03
Orleans	Klamath										.70					.55																4.08
Oroville	Sacramento																															0.55
Oxeana	Coast																															0.70
Palermo	Sacramento																															
Palm Springs	Desert																															0.00
Parkfield	Coast										.30																					0.30
Pasadena	do									.08																						0.08
Paso Robles	do										.06	.06																				0.12
Peachland	do									.10	1.11			.20		.34																1.75
Penstock Camp	San Joaquin																															
Phoenix Dam	do									.02	1.45						.18															1.65
Pilot Creek	Sacramento								.42	2.72	.16					1.14																4.44
Pinchot	Coast										T.																					T.
Pine Crest	do										.02																					0.02
Placerville	Sacramento									.24	1.17						.38															1.79
Point Lobos	Coast									.02	.47			T.	T.	.13																0.62
Point Loma	do			.02	.01							.02																				0.05
Point Reyes	do								.02	.09	.02			.15		.21																0.49
Polasky	San Joaquin										.32	.24																				0.56
Porterville	do										.28																					0.28
Portulaca	do																															
Prattville	Sacramento									.20	.78					.19																1.17
Priest Valley	Coast										.20																					0.20
Quincy	Sacramento									.30	1.00					.40	T.															1.70
Red Bluff	do								T.	.08						.05																0.13
Redding	do									.12	.39					.51																1.02
Redlands	Coast								T.		T.	.34																				0.34
Reedley	San Joaquin										.32																					0.32
Repressa	Sacramento								.02	.16						.41																0.89
Rialto (near)	Coast									.08	.32	.05				.01																0.46
Rio Vista	Sacramento																															0.00
Riverside	Coast																															0.00
Rocklin	Sacramento									.20						.15																0.35
Rohnerville	Coast							.11	.26	.25	.80			.40		.82	.26				.05											2.95
Sacramento (1)	Sacramen o									.02						.13																0.15
Sacramento (2)	do																															
St. Helena	Coast									1.04						.22																1.26
Salinas	do										.19																					0.19
San Bernardino	do										.30	.28																				0.58
San Diego	do										.02																					0.02
San Francisco	do								.03	.28	.17			.01		.11																0.60
San Jacinto	do																															0.00
San Jose	do								T.		.15			T.		.03																0.18
San Leandro	do																															
San Luis Obispo	do										.46																					0.46
San Mateo	do									.45				.60																		1.05
San Miguel	do										.07																					0.07
San Miguel Island	Ocean										.20																					0.20
Sanger	San Joaquin																															0.00
Santa Ana River	Coast										.95																					0.95
Santa Barbara	do										.02																					0.02
Santa Clara	do								.01		.37			T.		.03																0.41
Santa Cruz	do								T.	.90				T.		.20																1.10
Santa Margarita	do									T.		.30																				0.30
Santa Maria	do																															0.00
Santa Monica	do																															0.00
Santa Rosa	do									.03	.45			.02		.22																0.72
Sausalito	do										.72					.20																0.92
Selma	San Joaquin									.02	.39																					0.41
Seven Oaks	Coast	T.	T.								.52																					0.52
Shasta	Sacramento									.76																						0.76
Shingle Springs	San Joaquin										1.00						.40															1.40
Sierra Madre	Coast												.18																			0.18
Sierraville	Mountain Lakes										1.40	T.				.37	.10															1.87
Sisquoc Ranch	Coast			.17																												0.17
Sisson	Sacramento								.26	.62			.05		.22	.04																1.19
Soledad	Coast																															0.00
Sonora	San Joaquin									.01	1.33					.16																1.50
S. E. Farallon	Ocean									.12	.01			.01		.16																0.30
Spreckels	Coast								.02		.13						.10															0.25
Squirrel Inn	do										.45	1.05																				1.50
Stirling City	Sacramento									T.	2.20					.50																2.70
Stockton (S. H.)	San Joaquin										.18					T.																0.18
Storey	do						.06																									0.06
Suisun	Sacramento										.35					.15																0.50
Summerdale	San Joaquin											2.58				.20	.21															2.99
Summit (1)	Sacramento									.10	1.00	.12				.80																2.02
Summit (2)	Coast																															
Susanville	Mtn. Lakes							.04		.03	.60				.39																	0.97
Tamarack	Sacramento								.05	.20	2.00	.20				1.20																3.65
Tehachapi	San Joaquin																															0.00
Tehama	Sacramento										T.					T.																T.
Tejon Rancho	San Joaquin										.02																					0.02
Three Rivers	do										1.69					.02																1.71
Towle	Sacramento									.40	2.00					.15	1.20															3.75
Tracy	San Joaquin										.22																					0.22
Tulare	do										.38																					0.38
Tustin (near)	Coast											T.																				T.

TABLE 2.—*Daily precipitation for November, 1911. District No. 11*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
California—Contd.																																
Ukiah	Coast									.20	.65			.17		.32																1.34
Upland	do										.42																					0.42
Upper Lake	Sacramento								T.	.14	.56			.06							.20											0.96
Upper Mattole	Coast							.06	.32	1.37	.20		.70	.06	1.25	.38	.13	.02														4.49
Vacaville	Sacramento								.46					T.		.06																0.52
Valley Springs	San Joaquin									.10	.50						.08															0.68
Visalia	do																															0.00
Warner Springs	Coast										.08																					0.08
Wasco	San Joaquin																															
Watsonville	Coast								.07	.43																						0.50
Weitchpec	Klamath							.24	.87	1.28	.90	.09		1.22	.29	2.40	.17	.02			.05											7.53
West Branch	Sacramento								T.	.42	2.00	T.		T.		1.21																3.63
Westley	San Joaquin									.29																						0.29
West Point	do									.12																						0.12
West Saticoy	Coast										.13																					0.13
Wheatland	Sacramento									T.	.11			T.		.36																0.47
Willows	do															.05																0.05
Yosemite	San Joaquin								.03		1.75					.15	.20															2.13

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow

TABLE 3.—*Maximum and minimum temperatures at selected stations for November, 1911. District No. 11, California.*

Date.	Lakeview, Oreg.		California.																							
			Alturas.		Barstow.		Branscomb.		Brawley.		Colusa.		Eureka.		Fresno.		Independence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porterville.		Red Bluff.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	.....	.....	61	32	74	38	69	40	81	53	77	42	57	46	71	43	68	43	70	52	63	56	75	33	89	55	79	56
2	.....	.....	68	14	76	40	79	41	83	55	76	43	64	43	75	42	68	38	81	51	67	56	77	33	88	53	80	52
3	.....	.....	68	15	79	50	74	42	83	53	76	40	57	43	77	45	69	38	83	58	69	60	80	29	86	58	84	46
4	.....	.....	58	19	80	41	73	40	84	57	75	38	54	49	77	46	66	31	81	57	66	59	73	30	85	48	76	49
5	.....	.....	57	17	81	42	70	38	81	48	75	43	55	47	74	43	68	34	72	56	64	54	78	30	88	49	74	52
6	.....	.....	60	37	80	43	65	37	80	49	76	44	54	49	75	43	72	34	74	55	68	56	76	32	89	50	75	50
7	.....	.....	54	36	79	41	60	37	84	73	68	46	56	49	74	47	70	35	69	54	63	46	71	36	80	51	70	52
8	.....	.....	48	31	75	40	56	39	78	54	64	41	54	49	66	48	64	35	70	55	52	42	58	32	82	50	58	44
9	.....	.....	42	29	75	44	47	40	80	71	64	46	54	45	68	48	68	39	68	55	53	42	47	42	81	45	58	45
10	.....	.....	38	20	76	46	48	32	77	54	60	46	46	37	58	40	53	31	63	53	49	31	47	38	95	40	52	38
11	.....	.....	33	4	62	36	52	25	68	57	53	28	47	32	53	31	49	25	66	48	43	29	51	18	81	32	52	30
12	.....	.....	47	13	61	30	57	28	65	36	57	31	54	35	60	34	48	22	67	47	• 52	38	63	23	80	30	51	34
13	.....	.....	41	28	65	38	53	35	74	39	58	42	57	45	63	37	50	21	66	51	44	40	52	31	70	33	54	44
14	.....	.....	50	28	71	37	60	40	77	38	62	39	60	50	66	38	60	23	69	51	54	41	67	27	71	35	59	42
15	.....	.....	45	32	68	38	49	40	75	38	68	47	54	46	63	38	56	25	67	49	52	40	45	37	73	40	59	46
16	.....	.....	39	27	75	35	52	30	75	41	72	33	52	42	60	36	58	37	75	50	51	40	61	25	78	42	62	38
17	.....	.....	54	34	75	38	60	32	79	38	66	39	52	44	66	40	61	31	78	53	61	49	68	27	79	40	67	44
18	.....	.....	60	20	72	38	65	33	82	38	68	33	53	39	67	39	64	30	82	58	62	51	70	26	76	37	73	40
19	.....	.....	56	22	75	35	64	34	81	37	69	36	53	40	67	40	66	33	86	62	63	55	80	29	74	38	78	45
20	.....	.....	65	21	76	36	65	33	79	36	64	32	58	45	74	39	62	28	80	55	63	48	82	29	79	42	68	38
21	.....	.....	49	26	78	34	60	34	74	36	64	34	51	41	63	36	60	25	66	52	52	42	66	26	73	37	64	41
22	.....	.....	56	9	68	35	64	28	72	36	67	42	55	37	64	34	61	32	68	49	55	46	74	23	75	38	68	37
23	.....	.....	56	15	65	25	66	29	75	35	62	29	51	38	68	37	58	21	78	47	54	45	70	25	76	29	63	35
24	.....	.....	64	13	69	28	70	30	78	33	65	30	55	40	67	34	60	21	79	52	61	48	76	26	78	30	69	38
25	.....	.....	57	18	72	29	75	34	81	33	63	31	53	41	67	38	61	25	85	58	61	55	71	28	79	32	65	38
26	.....	.....	54	30	76	31	76	36	78	37	74	31	58	43	67	35	66	32	86	62	63	56	78	30	80	33	73	50
27	.....	.....	53	13	71	31	70	36	64	38	69	31	61	45	66	38	64	31	82	59	60	55	76	30	81	32	69	48
28	.....	.....	56	15	65	32	70	34	64	37	64	33	55	39	69	39	51	25	72	52	62	51	71	28	75	33	66	36
29	.....	.....	57	14	58	20	68	34	68	26	64	31	55	41	67	41	52	20	73	50	58	48	71	25	73	34	63	36
30	.....	.....	60	7	63	23	69	33	74	28	64	30	52	38	70	36	59	22	81	56	58	48	73	25	72	30	68	32
Mns.	.....	.....	53.5	21.3	72.0	35.8	63.6	34.8	76.5	43.1	64.6	37.0	54.6	42.6	67.4	39.5	61.1	29.6	74.6	53.6	58.1	47.6	68.2	29.1	79.5	39.9	66.6	42.5

Date.	California.																									
	Redlands.		Sacramento.		San Diego.		San Francisco.		San Jose.		San Luis Obispo.		Santa Barbara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	75	44	72	45	67	53	68	52	72	43	68	44	70	47	80	36	58	30	74	44	48	32	58	29	70	24
2	80	44	76	48	70	53	77	54	77	41	83	45	80	53	83	36	60	33	84	42	52	28	56	25	74	23
3	81	46	77	47	70	53	77	51	78	40	83	51	85	58	84	33	61	33	78	41	56	34	59	26	62	20
4	78	43	72	45	71	53	70	50	74	39	70	42	76	46	78	34	63	33	76	42	54	38	59	29	73	23
5	72	44	74	50	67	56	71	53	73	40	72	42	70	51	79	40	65	34	78	43	52	38	60	29	71	23
6	80	43	76	47	68	52	72	53	74	39	80	43	71	46	78	40	65	38	78	43	45	34	57	30	71	23
7	73	45	68	49	67	59	64	52	67	40	66	48	70	48	71	41	59	31	70	46	48	35	57	29	64	24
8	65	54	65	44	66	60	62	53	63	44	65	49	68	48	67	40	48	27	72	48	38	28	55	36	63	23
9	64	53	63	52	67	58	59	52	67	48	66	43	70	43	59	45	42	28	66	52	34	28	47	37	63	33
10	63	51	56	42	65	59	56	45	55	40	57	45	65	46	55	47	34	30	56	52	28	18	42	25	49	31
11	62	42	53	31	63	52	54	42	54	31	53	40	68	42	57	29	35	19	54	33	28	8	32	15	50	18
12	57	36	58	33	73	50	57	46	58	29	62	44	68	44	61	26	45	28	58	29	40	12	39	16	54	22
13	64	38	55	42	63	54	54	46	59	35	62	40	67	43	55	37	38	31	57	38	28	24	43	24	54	23
14	66	43	65	43	66	50	62	50	64	42	69	37	68	44	64	37	43	35	63	37	55	24	52	33	55	22
15	67	40	63	49	65	49	59	50	61	40	63	53	66	44	62	45	46	31	62	41	39	28	48	26	53	21
16	75	40	63	41	66	52	64	50	61	33	64	46	73	45	65	34	48	31	60	38	40	18	47	22	51	21
17	75	41	64	43	75	53	67	50	68	37	72	58	75	43	71	37	42	30	63	36	45	25	49	26	56	21
18	82	41	68	40	79	54	65	49	69	33	76	58	78	45	71	31	46	28	64	34	47	28	49	25	62	20
19	83	44	68	41	80	60	68	48	71	34	82	49	87	47	74	34	52	26	64	36	49	31	50	24	59	23
20	81	45	68	42	69	54	62	49	65	34	74	42	77	47	67	34	60	28	66	34	49	28	49	24	71	22
21	64	34	65	40	64	54	61	48	62	34	62	45	62	47	67	34	42	19	62	38	45	24	46	25	63	22
22	71	40	63	40	65	52	64	47	67	31	72	47	68	43	68	25	42	18	62	33	40	18	40	16	59	17
23	74	35	62	37	70	45	62	43	63	30	72	35	70	43	68	26	56	23	62	31	50	28	41	16	53	18
24	77	34	65	37	82	49	67	46	69	29	73	40	75	41	72	26	51	27	62	32	49	32	45	19	55	23
25	82	40	62	38	82	52	64	48	65	31	80	44	78	45	68	30	51	27	64	33	47	36	46	22	56	23
26	82	43	75	40	80	55	75	50	76	37	79	58	82	45	82	35	52	25	64	34	49	28	48	25	69	23
27	86	41	64	40	79	56	71	56	70	35	80	46	81	47	67	29	47	22	63	33	42	30	45	22	54	21
28	63	39	65	42	70	47	70	54	74	39	76	43	72	48	71	31	58	23	65	38	49	32	40	17	54	20
29	69	31	63	39	64	44	65	48	66	32	69	34	66	42	67	27	55	23	63	31	50	28	43	19	60	21
30	79	32	63	35	79	49	66	50	65	32	77	38	76	40	67	28	60	25	60	32	50	30	41	16	55	21
Mns.	72.7	41.5	65.7	42.1	70.5	52.9	65.1	49.5	66.9	36.4	70.9	45.0	72.7	45.7	69.3	34.2	50.8	27.9	65.7	38.1	44.9	27.7	47.8	24.2	60.1	22.3

a, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§ § Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR NOVEMBER, 1911.

DISTRICT No. 12, COLUMBIA VALLEY.

EDWARD A. BEALS, District Editor.

THEODORE F. DRAKE, Acting District Editor.

November, as a whole, was notably cool throughout this district. The opening and closing days of the month were mostly pleasant, but from the 3d to the 20th the weather was generally stormy. There were frequent high winds along the coast, and during one of these gales, with a very rough sea, the steam schooner *Washington*, lumber laden and with 26 passengers and crew of 22 aboard, went aground on Peacock Spit near the North Head Weather Bureau Station, on the 12th, and was in grave danger. The official in charge at North Head promptly notified the authorities and after several attempts at rescue the steam tug *Tatoosh*, Capt. Bailey, during a slight lull in the storm on the afternoon of the 13th succeeded in getting a line aboard the *Washington* and towed her out to sea and into the Columbia River. The loss is estimated at about $2,000 for cargo lost overboard, and $7,500 damage to the vessel. No lives were lost.

Although the precipitation was below normal in most sections, a larger percentage than usual occurred in the form of snow, and on account of the low temperatures prevailing considerable snow remained on the ground at the close of the month, especially in the mountainous sections of the interior. From the 8th to the 15th heavy snows fell on the west slope of the Rockies in Montana, and snow slides occurred in the vicinity of Fielding and Java on the Great Northern Railroad, which interfered greatly with traffic. In the Cascade Mountains in Washington the unusually heavy snowfall melted rapidly with the warm rains of the 16th to 20th, and the enormous volume of water thus set free caused sudden and severe freshets in the rivers flowing to Puget Sound and the lower Columbia. Many railroad tracks and bridges, and county roads and bridges were washed out, resulting in the loss of thousands of dollars. On some railroads traffic was blocked for periods of 2 to 12 days. These freshets began suddenly and almost without warning in the upper reaches of the streams, but in the lowlands near tidewater the water level rose gradually so that imperiled persons were rescued and no loss of life occurred directly due to the floods.

TEMPERATURE.

The average temperature as determined from 253 stations was 36.3°, or 2.5° below the normal. The lowest temperatures were encountered in the eastern parts of the district and the highest west of the Cascade Mountains. The most notable feature was the cold period which occurred between the 8th and 13th. The cold was greatest in the northern portions of the district. In the State of Washington it was unparalleled for the season of the year. On the 11th the temperature at Republic, Wash., reached 15° below zero, which is the lowest temperature ever recorded in Washington so early in the season. In the State of Idaho the mean temperature was the lowest on record with two exceptions, and in Montana the average temperature was 5.3° below the normal for November.

In Oregon and Washington the opening days of the month were warm and a large proportion of the maximum temperatures were then recorded. In the eastern portion of the district the maximum temperatures for the month occurred more generally on or following the 20th.

The highest mean temperature was 49.5° at Gardiner Oreg., and the lowest 18° at Bedford, Wyo. The highest temperature recorded was 79° at Gold Basin, Wash., on the 19th, and the lowest —26° at Fortine, Mont., on the 11th and at Afton and Bedford, Wyo., on the 28th.

PRECIPITATION.

The average precipitation as determined from the records of 363 stations was 3.95 inches, or 0.90 inch below the normal. While the deficiency was quite general over the district, some sections report an excess, notably that portion of the coast near the mouth of the Columbia River, southeastern Idaho, and western Montana. The greater part of the precipitation occurred, in all portions of the district, between the 3d and the 18th, although along the Washington and northern Oregon coast the rains continued almost uninterrupted to the end of the month. General rains occurred also on the 25th and 26th over the entire district.

The greatest monthly amount recorded was 27.79 inches at Quiniault, Wash., and the least 0.03 inch at Moxee, Wash. The greatest 24-hour precipitation was 6 inches at South Bend, Wash., on the 18th. The greatest snowfall recorded for the month was 84.5 inches at Snoqualmie Pass, Wash.

THE RIVERS.

The flow in the Willamette and Snake Rivers averaged about normal; in the former it was a little above and in the latter a little below. The most deficient flow was in the Columbia River which averaged 2 feet below normal for the month. The average stages have not been so low on this river during any November since the year 1904. The maximum stages on this stream occurred on the 20th or a few days later, and the minimum in a majority of cases during the first week. The mean stage at The Dalles was 1.9 feet and the lowest reading 1.3 feet. At Cascade Locks the mean stage was 1.1 feet and the lowest reading zero. The average stage was from 0.5 foot to 2.1 feet lower than in October.

On the Willamette River the highest stages occurred from the 16th to the 19th and the lowest during the first week. The river was much higher on the average than in the preceding month, owing to the generous rainfall in western Oregon about the middle of the month and the consequent sharp rise in the Willamette and its tributaries. The highest water recorded on the lower gage at the Oregon City Locks was 16.9 feet and the lowest

2.6 feet. At Portland the highest stage was 7.8 feet and the lowest 0.8 foot.

The highest water in the Snake River occurred during the second week. The water was low at both the beginning and the close of the month, but the average stages were a little higher than in October.

The month closed with decreasing stages in practically all streams.

MISCELLANEOUS.

November was an unusually windy month in the Puget Sound and coast districts. At Seattle the average velocity was 11.9 miles per hour, the highest rate yet recorded for that station, and the maximum velocity was 52 miles per hour from the southwest on the 20th. At Tatoosh the maximum velocity was 70 miles from the south on the same date. The highest wind velocity at North Head was 78 miles from the southeast on the 12th. Thunderstorms occurred quite generally in Idaho on the 15th. Killing frosts occurred in the western part of the district from the 9th to 11th. The sunshine was several per cent below the normal, and dense fogs occurred at Seattle, Tacoma, Tatoosh Island, North Head, and Portland on several dates.

TABLE 1.—*Climatological data for November, 1911. District No. 12, Columbia Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Montana.																				
Anaconda	Deer Lodge	5,300	10	27.8	− 6.0	52a	19	− 15a	11	39a	0.83	+ 0.05	0.21	9.3	6	5	13	12	.....	C. D. Demond.
Butte	Silver Bow	5,716	17	26.9	− 6.4	53	20	− 12	11	33	0.95	+ 0.17	0.25	9.5	8	11	4	15	w.	J. R. Wharton.
Columbia Falls	Flathead	3,100	16	23.2	− 8.7	47	14†	− 12	11	35	3.35	+ 0.95	0.44	22.7	16	8	1	21	se.	J. M. Grist.
Como **	Ravalli	.....	3	31.1	.....	47	4†	2	11	23	2.13	.....	0.38	11.0	13	8	1	21	.....	Hiram Platt.
East Anaconda	Deer Lodge	5,500	6	27.8	.....	56	19	− 12	11	42	0.78	.....	0.35	7.1	9	5	13	12	w.	C. D. Demond.
Fortine	Lincoln	2,975	6	24.8	.....	62	21	− 26	11	44	2.16	.....	0.49	18.0	12	9	5	16	s.	Mike Petery.
Hamilton	Ravalli	3,575	8	32.6	− 3.6	57	20	− 3	11	29	1.05	+ 0.08	0.34	4.3	6	10	12	8	s.	Bitter Root Valley Irrig. Co.
Hat Creet	Powell	6,000	2	.....	.....	.....	.....	.....	.....	.....	1.57	.....	0.37	24.4	10	4	3	23	w.	M. K. Landreth.
Kalispell	Flathead	2,965	13	25.6	− 6.4	46	18	− 8	11	32	2.49	+ 0.59	0.70	16.2	14	3	5	22	nw.	U. S. Weather Bureau.
Libby	Lincoln	2,055	....	25.2	.....	48	7	− 15	11	37	1.87	.....	0.47	14.0	11	9	7	14	.....	U. S. Forest Service.
Lost Creek	Deer Lodge	5,200	2	.....	.....	.....	.....	.....	.....	.....	0.30	.....	0.16	10.0	3	16	9	5	w.	Frank Henault.
McGinnis Meadows	Lincoln	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. L. Bebee.
Missoula	Missoula	3,225	32	30.0	− 2.2	54	20	− 2	12	34	0.58	− 0.75	0.15	2.6	9	.....	.....	.....	.....	U. S. Weather Bureau.
Ophir	Powell	6,800	2	.....	.....	.....	.....	.....	.....	.....	1.04	.....	0.30	15.5	8	4	14	12	w.	E. S. Wilton.
Ovando	....do	4,207	12	20.6	− 8.7	41	19	− 18	11†	36	.....	.....	.....	.....	.....	.....	.....	.....	w.	S. B. Muchmore.
Philipsburg	Granite	5,275	8	27.2z	.....	58z	20	− 12z	11	39z	1.31	.....	0.40	11.0	8	7z	4z	12z	sw.	G. T. Bramble.
Plains	Sanders	2,475	13	32.0	− 0.4	58	20	0	11	30	2.50	+ 1.04	0.53	10.5	7	12	0	18	sw.	M. H. Pierce.
Pleasant Valley	Flathead	3,500	4	24.6	.....	50	19	− 31	11	62	3.67	.....	0.70	14.5	14	7	7	16	.....	A. D. Stillman.
Polson	....do	2,920	4	29.7	.....	47	2	− 2	12	29	2.04	.....	0.40	10.0	8	.....	.....	.....	.....	F. P. Brown.
Proctor	....do	2,800	7	29.0	.....	46	13	− 2	11	34	.....	.....	.....	.....	.....	19e	0e	8e	.....	C. E. Proctor.
St. Ignatius	Missoula	2,700	6	25.5	.....	64	20	− 12	12	46	1.55	.....	0.40	11.6	9	3	7	20	se.	U. S. Reclamation Service.
St. Regis	....do	2,650	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. D. Lee.
Saltese	....do	3,600	7	.....	.....	.....	.....	.....	.....	.....	6.70	.....	1.12	42.0	14	10	0	20	w.	E. K. Tarbox.
Stevensville	Ravalli	.....	....	31.4	.....	60	21	− 4	11†	35	0.83	.....	0.25	6.6	8	7	4	19	w.	J. S. Birge.
Thompson Falls	Sanders	2,462	....	31.0	.....	54	20	0	12	27	3.62	.....	0.50	13.5	18	6	4	20	w.	R. H. Bushnell.
Willow Glen Stock Farm.	Deer Lodge	5,064	1	.....	.....	.....	.....	.....	.....	.....	0.60	.....	0.50	6.0	2	7	6	17	sw.	G. E. Luce.
Wyoming.																				
Afton	Uinta	6,200	7	25.7	− 4.6	52	1†	− 26	28	62	1.39	+ 0.52	0.40	14.5	15	14	1	15	.....	A. V. Call.
Alta	....do	7,000	1	21.1	.....	50	20	− 23	28	43	1.87	.....	0.25	21.3	11	.....	.....	.....	sw.	Mrs. Lucy Brown.
Bechler River	Yellowstone Park	.....	....	.....	.....	.....	.....	.....	.....	.....	4.48	.....	0.60	43.5	17	16	1	13	sw.	U. S. Army.
Bedford	Uinta	5,900	11	18.0k	−12.7	45k	20	− 20k	28	38k	1.37	+ 0.31	0.28	13.7	....	9k	2k	8k	w.	C. G. Heiner.
Moran	....do	.....	....	19.3	.....	46	1	− 20	28	37	3.54	.....	0.65	35.4	12	4	6	20	sw.	U. S. Reclamation Service.
Snake River	Yellowstone Park	7,000	5	19.2	.....	49	5	− 33	28	52	5.60	.....	1.75	75.0	14	11	6	13	s.	U. S. Army.
Nevada.																				
San Jacinto	Elko	.....	6	30.9	.....	63	1	− 7	12	49	0.93	.....	0.60	7.5	6	15	0	15	nw.	Mose Jones.
Utah.																				
Standrod	Boxelder	.....	6	31.8	.....	55	3	4	12	31	1.04	.....	0.31	5.5	8	15	3	12	sw.	T. B. Jones.
Idaho.																				
Albion	Cassia	4,650	10	33.9	− 3.8	66	20	2	12	45	1.78	+ 0.43	0.69	6.5	9	2	15	13	w.	C. E. Bocock.
Almo	....do	.....	3	.....	.....	.....	.....	.....	.....	.....	1.08	.....	0.40	.....	6	15	14	1	.....	Wm. D. Cahoon.
Alpha	Boise	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. W. King.
American Falls	Oneida	4,341	10	27.4	− 7.7	55	3	0	11†	46	2.23	+ 0.97	0.45	T.	8	15	0	15	s.	Geo. Stoll.
Arrow Rock	Boise	.....	....	.....	.....	.....	.....	10	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Reclamation Service.
Blackfoot	Bingham	4,503	16	29.0	− 5.0	54	20	− 3	28	41	2.20	+ 1.28	0.50	11.9	9	6	15	9	sw.	E. A. Dowd.
Blackfoot Dam	Bannock	6,200	2	.....	.....	.....	.....	.....	.....	.....	2.07	.....	0.35	21.5	14	12	3	15	sw.	N. W. Irsfield.
Bocks Ranch	Elmore	3,500	2	.....	.....	.....	.....	.....	.....	.....	3.53	.....	0.77	15.6	12	.....	.....	.....	.....	William Bock.
Bogus Creek	Boise	4,200	3	.....	.....	.....	.....	.....	.....	.....	3.17	.....	0.70	8.7	11	10	8	12	.....	F. P. Ingraham.
Boise	Ada	2,739	26	37.8	− 1.8	59	20	16	11	26	1.70	+ 0.84	0.42	0.7	9	9	9	12	se.	U. S. Weather Bureau.
Bonners Ferry	Bonner	1,850	4	28.9	.....	57	8	− 10	11	37	2.78	.....	0.60	25.0	15	4	17	9	sw.	W. H. Heideman.
Boulder Mine	Boise	4,800	2	.....	.....	.....	.....	.....	.....	.....	4.73	.....	0.71	38.5	15	16	1	13	.....	Patrick Moriarty.
Buhl	Twin Falls	3,800	5	37.2	.....	60	1	12	12†	31	0.14	.....	0.03	T.	7	17	11	2	w.	Hugh Taylor.
Caldwell	Canyon	2,372	7	37.0	.....	61	20	15	11†	36	1.29	.....	0.42	0.0	11	10	13	7	e.	Wm. J. Boone.
Camas	Fremont	4,815	3	27.8	.....	69	20	− 7	12	61	0.63	.....	0.41	5.5	3	7	16	7	n.	Mrs. Edna Faulkner.
Cambridge	Washington	2,651	16	.....	.....	.....	.....	6	11	....	1.71	− 0.76	0.76	4.0	6	.....	.....	.....	.....	Chas. H. Shepherd.
Cedar Creek Dam	Twin Falls	.....	1	.....	.....	.....	.....	.....	.....	.....	2.12	.....	1.05	11.0	7	10	10	10	nw.	Robert Hoffman.
Chesterfield	Bannock	5,424	16	24.1a	− 6.0	59	1	− 20	28	56	1.75	+ 0.90	0.25	25.0	9	15	2	13	.....	Chas. S. West.
Clyde	Custer	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. L. Sutcliffe.
Council	Adams	.....	.....	.....	.....	.....	.....	1	11†	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. L. Featherston.
Culdesac	Nez Perce	1,520	3	40.8	.....	65	2†	9	11	42	1.49	.....	0.95	0.2	4	10	10	10	.....	R. R. Richmond.
Deary	Latah	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. P. Henry.
Dent	Clearwater	1,350	....	36.0	.....	57	1	18	12	29	5.14	.....	0.80	14.5	13	5	5	20	.....	Emil Schuessler.
Driggs	Fremont	6,097	5	20.8	.....	46	3	− 24	28	38	1.46	.....	0.36	21.0	11	9	4	17	sw.	Walter H. Durrant.
Emmett	Canyon	2,350	5	37.7a	.....	59	1	9	22†	38	1.72	.....	0.60	0.8	8	7	6	17	w.	C. P. Kar.
Forney	Lemhi	.....	13	26.4	− 4.2	53	6†	− 14	12	45	0.71	− 0.98	0.23	15.1	4	10	6	14	.....	M. B. Merritt.
Garden Valley	Boise	3,600	6	.....	.....	.....	.....	.....	.....	.....	2.65	.....	0.55	16.0	8	10	10	10	.....	Mrs. Gertrude M. Ross.
Garnet	Elmore	2,575	12	41.0	− 2.7	62	19	15	30	38	0.37	− 0.35	0.18	0.0	4	19	5	6	w.	Asa A. Kenison.
Glenns Ferry	....do	2,569	4	36.4	.....	60	3†	9	30	46	1.23	.....	0.30	1.5	9	19	4	7	.....	I. E. Perkins.
Gooding	Lincoln	3,572	2	33.0	.....	58	1	1	11	38	2.15	.....	0.48	4.0	11	14	5	11	w.	John Krall, jr.
Grand Forks	Shoshone	3,000	2	.....	.....	.....	.....	− 5	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Henry Kottkey.
Grandview	Owyhee	.....	2	35.8	.....	59	3	8	28	43	0.73	.....	0.23	.....	10	11	5	14	nw.	N. G. Massey.
Grimes Pass	Boise	5,200	2	.....	.....	.....	.....	.....	.....	.....	3.81	.....	0.46	29.5	14	.....	.....	.....	.....	Joseph M. Clarke.
Guffey	Owyhee	2,381	3	39.8	.....	60	1†	15	30	38	1.49	.....	0.31	T.	14	12	13	5	w.	Fred Perry.
Hailey	Blaine	5,347	8	28.4	− 7.4	52	1	− 5	11†	30	1.59	+ 0.29	0.80	13.0	8	13	10	7	sw.	U. S. Forest Service.
Hotspring	Owyhee	2,752	6	39.8	.....	62	1	12	30	37	1.03	.....	0.44	0.0	8	14	5	11	.....	J. M. Waterhouse.
Idaho City	Boise	4,000	12	.....	.....	.....	.....	.....	.....	.....	3.56	+ 0.70	0.60	24.5	9	.....	.....	.....	.....	Mrs. Emma Hammer.
Idaho Falls	Bonneville	4,742	17	28.0	− 3.8	49	3	− 4	28	34	1.47	+ 0.36	0.36	6.8	9	10	2	18	.....	Dr. T. M. Bridges.
Indian Valley	Adams	2,999	3	.....	.....	.....	.....	.....	.....	.....	2.50	.....	0.42	12.5	11	11	7	12	s.	A. M. Henke.
Irwin	Bonneville	6,500	2	24.4	.....	52	3	− 17	28	46	1.29	.....	0.27	12.2	6	13	3	14	e.	Miss Eva Johnston.
Kellogg	Shoshone	2,305	7	32.2	.....	55	1	6	11†	35	5.00	.....	0.93	15.8	14	4	4	22	.....	W. McM. Huff.
Kirkham	Boise	4,200	2	.....	.....	.....	.....	.....	.....	.....	3.06	.....	0.60	20.0	7	7	15	8	.....	Mrs. Josie B. West.
Kooskia	Idaho	1,261	3	35.2	.....	51	22	13	12	28	1.42	.....	0.30	5.5	10	4	6	20	sw.	U. S. Forest Service.
Lakeview	Bonner	2,250	14	32.2	− 5.3	50	3	5	12	25	3.83	− 0.51	0.82	38.0	15	8	1	21	sw.	E. D. Faust.
Landore	Adams	5,300	7	28.2	.....	52	1†	− 1	11	32	4.32	.....	0.70	44.6	14	9	11	10	.....	Mrs. Emma L. Brown.
Lewiston	Nez Perce	757	11	40.5	− 0.4	59	18	19	11	28	0.82	− 0.50	0.30	0.4	10	6	8	16	e.	U. S. Weather Bureau.
Little Camas	Elmore	5,000	3	.....	.....	.....	.....	.....	.....	.....	3.49	.....	0.59	25.4	11	5	14	11	w.	Solon McCoy.
Loon Creek	Custer	6,000	7	24.3	.....	46	1	− 12	28	41	1.50	.....	0.34	21.0	10	8	3	19	sw.	Mrs. Mary Williams.
Mackay	....do	5,897	4	26.6	.....	52	5	− 2	29	37	0.47	.....	0.20	7.0	4	11	11	8	nw.	U. S. Forest Service.

TABLE 1.—*Climatological data for November, 1911. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Idaho—Continued.																				
Meadows	Adams	3,950																		Chas. A. Hackney.
Meridian	Ada	2,657	1	37.0		61	20	15	11	36	1.48		0.45	0.9	12	8	9	13	se.	A. W. Garrett.
Mesa	Adams	3,275	2	33.9[b]		59	1	1	11	33									se.	I. S. Carter.
Middle Fork	Idaho	1,250	2	36.4		54	1†	15	12	30	3.70		0.55	6.4	16	7	3	20		Jos. McGhee.
Milner	Twin Falls	4,110	7	34.6		55	3†	5	12	44	1.67		0.59	2.2	5	10	7	13	w.	James K. Young.
Moscow	Latah	2,748	20	35.6	− 2.1	56	1	3	11	29	1.59	− 1.67	0.50	9.5	10	13	3	14	w.	University of Idaho.
Mountainhome	Elmore	3,150	6					7	28											Mrs. Ellen Manion.
Murtaugh	Twin Falls		5	33.2[c]		54[c]	20	4[c]	12	33[c]	1.45		0.60	2.5	7				w.	J. E. Steinour.
Nez Perce	Lewis	3,082	2	32.8		56	20	1	11	34	0.74		0.27	8.0	7					P. Mitchell.
Oakley	Cassia	4,700	18	34.3	− 4.4	67	2	9	28	44	1.03	+ 0.22	0.30	2.0	5	11	10	9	s.	John Adams.
O'Hara Bar	Idaho	1,400	2	33.5[a]		49[a]	21	14[a]	12	24[a]	4.72		0.58	12.0	17					J. D. Agnew.
Orofino	Clearwater	1,027	7	33.8		58	22	5	28	35	3.45		0.62	13.5	14	5	18	7		Geo. Alteneder.
Payette	Canyon	2,159	20	36.6	− 3.9	59	3	14	11†	38	1.03	− 0.16	0.47	1.2	7	12	5	13	n.	E. F. Allen.
Peaceful Valley	do	2,325	1																	J. W. Newton.
Pebble	Bannock	5,277	3	25.8		51	2	− 13	28	45	3.70		0.97	41.0	14	13	1	16	sw.	Mrs. Fannie Say.
Pierson	Custer	7,000	3	23.4		72	2	− 22	28	50	1.73		0.72	17.0	5	12	0	18	s.	David P. Clarke.
Pine	Elmore	4,100	2								2.44		0.51	25.4	9	6	15	9		Mrs. Jennie Potter.
Pleasant Valley	Ada	3,000	4	35.4		60	20	13	27	36	1.36		0.45	0.3	12	14	3	13	se.	C. E. Friedrich.
Pocatello	Bannock	4,483	12	32.4	− 4.3	53	3	5	29	33	2.02	+ 1.47	0.41	8.9	12	9	9	12	se.	U. S. Weather Bureau.
Pocatello Nursery	do	5,396	5																	P. T. Wrensted.
Poplar	Bonneville			25.5		52	19†	− 8	28†	40				18.1		6	6	18	sw.	C. M. Lawrence.
Porthill	Bonner	1,665	22	27.0	− 6.5	48	1	− 8	11	29	2.22	− 1.08	0.33	21.0	15	10	1	19		H. A. French.
Powers' Ranch	Boise	4,300	3								4.13		1.00	26.4	10	20	0	10		Mrs. Mary French.
Pyle Creek	do	3,100	2								4.03		0.91	17.6	11	12	6	12	w.	P. V. Smith.
Rattlesnake Creek	Elmore	4,000	3								3.76		0.62	17.3	13	10	6	14		R. M. Green.
Richfield	Lincoln		2	30.4		56	1	− 5	12	37	2.14		0.61	13.7	9	12	12	6	sw.	Idaho Irrigation Co.
Roseberry	Boise		1					− 20	28							10	6	14		Rev. H. F. Barstow.
Roseworth	Twin Falls		2								0.66		0.34	5.5	6	17	6	7	w.	D. B. Hartwell.
Ruby Creek	Boise	4,400	3								4.96		1.05	28.5	13	9	10	11	w.	O. A. Hatter.
Rupert	Lincoln	4,204	5	32.8		57	1	5	28	39	1.74		0.33	2.5	9	18	2	10	w.	Will Parry.
St. Maries	Kootenai	2,263	15	33.0[a]	− 5.6	50[a]	2	10	11	30[a]	3.82	− 0.54	0.68	13.6	15				sw.	J. S. Turnbull.
Salmon	Lemhi	4,040	6	28.1		51	7	− 1	12	32	1.73		0.40	9.5	6	7	22	1	nw.	B. C. d'Easum.
Salmon River Dam	Twin Falls		4																	P. W. Farrar.
Sandpoint	Bonner	2,086	1	29.2		49	1†	− 2	11	35	5.37		0.98	22.2	12	10	2	18	s.	J. H. Edgerton.
Sheep Hill	Boise	5,000									4.72		0.90	25.5	12					C. M. Gardner.
Shoshone	Lincoln	3,968	4	32.0		52	3†	4	12	31	2.47		0.62	5.4	9	9	17	4	w.	Zell Truman.
Silver City	Owyhee	6,280	4								2.44		0.72	17.0	11	11	4	15	sw.	A. D. Bradfield.
Smith Prairie	Elmore	5,200	2								3.37		0.75	2.6	9					William W. Newell.
Soldier Creek	Blaine		1								3.62		1.00	28.7	10	13	8	9	nw.	J. E. Minear.
Spirit Lake	Kootenai		2	30.8		61	1	− 4	11†	46	5.70		1.07	32.5	16	12	5	13	ne.	M. C. Krause.
Springfield	Bingham	4,420	3	34.8		60	2	4	28	37	1.60		0.38	12.5	9	10	12	8		Mrs. W. A. Edwards.
Sugar	Fremont		4	31.5		56	1	− 7	27†	50	0.99		0.44	7.0	7	11	5	14	sw.	Utah-Idaho Sugar Co.
Sunnyside	Elmore		2	35.2		58	3†	11	28†	37	1.32		0.30	T.	8				nw.	Col. M. W. Wood.
Tripod Mountain	Boise	4,300	2								2.49		0.56	16.6	10	11	4	15		Mrs. Verna Paddock.
Twin Falls	Twin Falls	3,825	6	33.4		58	19	3	29	38	1.88		0.40	0.5	9	10	10	10	w.	J. A. Waters.
Vernon	Fremont		14	26.4	− 6.9	49	1†	− 7	11	38				9.5		10	16	4	sw.	A. M. Slatery.
Wallace	Shoshone	2,728	4	31.8		48	20	7	11†	23	7.44		1.18		17				e.	U. S. Weather Bureau.
Weiser	Washington	2,114		38.8		58	2†	15	11	35	0.76		0.42	T.	9	8	10	12	s.	C. O. Sappington.
Wendell	Lincoln	3,400	3	34.6		59	1	10	12	39	1.39		0.40	0.1	6	14	9	7	w.	Chas. L. Dingler.
Washington.																				
Aberdeen	Chehalis	162	20	43.4	−23	58	1†	18	11	21	17.22	+ 2.40	4.07	13.5	20	0	20	10	w.	C. S. Weatherwax.
Anacortes	Skagit	60	17	41.7		56	24	12	11	22	4.41	− 0.11	1.21	2.2	15	1	17	12		Douglas Allmond.
Baker	do	200	5	39.8		61	1	10	11	23	15.50		2.09	14.8	19	0	6	24		R. M. White.
Bellingham	Whatcom	60	16	43.0	− 2.0	59	1	8	11	27	5.27	− 0.42	1.00	4.0	17	6	8	16		Sanford B. Mayhew.
Bellingham (near)	do	107		40.4		56	1	9	11	27	6.98		1.65	6.0	21	8	8	14		U. S. Bu. of Plant Industry.
Beverly	Grant	545																		
Blaine	Whatcom	57	14	40.0	− 1.1	54	20	5	11	23	7.75	+ 0.89	1.17	5.0	20	2	15	13	ne.	John W. Sheets.
Blewett	Chelan	2,200	1								4.17		1.40	35.0	16					John Burmeister.
Bremerton	Kitsap	30									4.19		1.74		13					U. S. Navy Yard.
Brewster	Okanogan	1,620	1	31.0		56	3†	− 5	11	24	0.61		.30	8.5	5	11	14	5	ne.	Mrs. H. F. Bertram.
Bumping Lake	Yakima	3,400		31.6		61	2	1	10	36	3.93		1.20	23.5	15	10	3	17		U. S. Reclamation Service.
Cedar River	King	535	4								7.58		1.65	2.5	15	2	5	23		Geo. Landsburg.
Centralia	Lewis	212	18	43.7	− 1.5	60	7†	5	11	29	9.17	+ 0.32	1.80	8.5	22	0	9	21	s.	I. S. Turner.
Cheney	Spokane	2,351	12																	
Cle Elum	Kittitas	1,930	12	35.0	− 2.5	58	3†	8	11	29	5.56	+ 1.16	1.23	21.0	15	10	11	9	nw.	J. A. Balmer.
Clearbrook	Whatcom	140	8																	
Colfax	Whitman	2,300	22	39.9	+ 0.8	65	1	3	11	50										I. B. Doolittle.
Colville	Stevens	1,635	11	29.9	− 3.6	56	3	5	11	37	2.47	+ 0.29	.76	12.5	7	9	7	14	sw.	W. L. Sax.
Conconully	Okanogan	2,300	11	30.6	− 3.9	58	1†	− 11	11	37	.88	− 1.03	.24	7.0	7	9	11	10		Wm. Baines.
Cowiche	Yakima	1,874		38.2		62	3	6	11	31	.48		.15	3.0	7	16	11	3	nw.	U. S. Reclamation Service
Crescent	Lincoln	2,250	11	30.2	− 6.3	53	7	− 3	11	34	1.38	− 1.04	.87	16.0	5	13	2	15		Otto Mollweber.
Davenport	do	2,450	2	31.4		56	3	− 4	11	36	1.80		1.31	9.5	6	9	10	11		J. L. Thayer.
Dayton	Columbia	1,700	25	39.8	− 0.4	64	20	7	11	36	1.79	− 0.74	.40	4.0	14	5	10	15		W. W. Hendron.
Deer Park	Spokane	2,050		31.8		58	1	8	11	44	2.32		.65	20.2	9	6	4	20	sw.	James Mills.
Detroit	Mason	30	3	43.4		59	7	23	11	20	8.42		1.57	2.0	19	4	7	19	s.	Walter O. Eckert.
Dixie	Walla Walla	5,000	2																	
Dryden	Chelan	960																		
Duckabush	Jefferson	380	3	39.8[f]		54[f]	7	23[f]	11	22	4.67		1.55	22.0	9	10[f]	8[f]	6[f]	sw.	E. G. Newman.
East Sound	San Juan	500	16																	
Ellensburg	Kittitas	1,571	23	34.8	− 15	60	19	− 4	11	38	.25	− 1.39	.20	2.5	2	8	14	8		R. L. Barnes.
Ephrata	Grant	1,265	8																	
Forks	Clallam	480	2								23.42		5.92	7.5	20	0	7	23	s.	R. L. Palmer.
Fort Simcoe	Yakima	1,427	17	35.6[c]	− 5.2	67[c]	3	− 4[c]	11	40[c]	1.15	− 1.22	.40		6	7[d]	13[d]	6[d]	sw.	Dr. F. H. Monk.
Gerome	Stevens	1,200		32.4		51	4†	− 1	11	24	1.53		.48	13.0	6	9	8	13		J. H. C. Scurlock.
Goat Lake	Snohomish	2,900	2								25.77		3.20	40.7	22					C. M. MacIntosh.
Gold Basin	do	1,360		40.2		79	19	9	11	37	23.58		3.30	12.0	18	5[c]	8[c]	14[c]	ne.	U. S. Forest Service.
Gold Creek	Yakima	2,600	2								1.52		.55	10.5	7	9	12	9		J. W. Anderson.
Goldendale	Klickitat	1,600	5	38.7		61	3	9	11	31	1.09	− 1.99	.20		10	0	22	8	w.	Klickitat Co. Abstract Co.
Granite Falls	Snohomish	397	8																	
Grays River	Wahkiakum																			
Guler	Klickitat	2,200	1											15.2		8	0	22		Frank Kuehnel.
Hatton	Adams	1,100	6	36.3		60	1†	2	11	39	0.63		.30	5.5	5	6	2	22	nw.	A. V. Marion.
Huntsville	Columbia	1,400	3								1.44		.40		6					Mrs. S. J. Hill.
Irene Mountain	Okanogan	3,015	2								.98		.29	10.5	10	1	15	14	nw.	Mrs. Manda Shain.
Kennewick	Benton	368	16	38.9[f]	− 3.1	67[f]	2†	9[f]	27	49[f]	.09	− .84	.09	T.	1					R. E. Reed.

TABLE 1.—*Climatological data for November, 1911. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Washington—Contd.																				
Kettle Falls	Stevens	1,265	2	31.6	.....	65	1	5	11	46	1.86	.....	.47	13.5	11	7	11	12	.....	Harry H. Cole.
Kiona	Benton	430	6																	
Kosmos	Lewis	775	5	41.4	.....	64	1†	7	11	33	11.93	.....	1.57	16.5	19	1	16	13	ne.	J. A. Ulsh.
La Center	Clarke	250	14	41.2	− 2.2	64	13	14	10	31	6.03	− 3.40	1.27	3.5	18	2	16	12	sw.	Joseph Brothers.
La Crosse	Whitman	1,400	2	37.8	.....	64	20	8	11	42	1.80	.....	.70	6.0	7	9	7	14	sw.	M. E. Schreck.
Lake Clealum	Kittitas	2,171	2								12.99	.....	1.64	36.5	18	4	2	24	nw.	U. S. Reclamation Service.
Lake Kachess	do	2,235	3	30.2	.....	54	3	− 5	11	35	17.39	.....	2.40	36.0	20	3	17	10	e.	Do.
Lake Keechelus	do	2,479	3								12.20	.....	2.32	48.0	18	2	6	22	w.	Do.
Lakeside	Chelan	1,116	20	34.4	− 3.6	61	4	6	11	38	.81	− 1.10	.24	8.0	8	2	22	6	e.	W. H. Van Meter.
Laurel	Klickitat	1,900	2								3.44	.....	.69	13.2	15	1	24	5	w.	Mrs. Minnie E. Strout.
Laurier	Ferry	1,644	1	28.8	.....	53	4	− 1	11	31	2.67	.....	.55	22.2	15	8	1	21	se.	Mrs. J. S. Myers.
Lester	King	1,614	7	39.1	.....	67	2	3	11	37	5.34	.....	1.30	.....	15	2	6	22	w.	Augestine Smith.
Lone Tree	Chehalis	14	2			55	5†				14.58	.....	3.03	5.0	25	0	10	20	nw–e.	U. S. Engineers.
Longmires Springs	Pierce	2,800	2																	
Lost Creek	Okanogan	3,125	2								0.61	.....	0.13	7.5	7	8	14	8	se.	P. H. Leese.
Lucerne	Chelan	1,100	4																	
McConihe	Grant	1,072	....	35.0	.....	61	18	− 1	11	37	.51	.....	.15	2.5	7	9	11	10	nw.	Lucian McConihe, jr.
McCumbers Ranch	Yakima	2,182	2								3.40	.....	.80	16.0	10	5	16	9	s.	Mrs. Mary McCumber.
Moses Lake	Grant																			
Mottinger	Benton	307	11	42.8	− 1.3	68	7	16	11	31	.39	− .74	.26	T.	3	23	2	5	w.	G. H. Mottinger.
Mt. Pleasant	Chelan	500	....	39.3	.....	55	3	8	11	21	5.39	.....	1.42	16.8	15	6	14	10	nw.	Wm. M. Boor.
Moxee	Yakima	1,000	19	37.0[a]	− 2.2	67	18	0[a]	11	40[a]	.03	− 1.19	.03	0.3	1	12	11	7	w.	Henry B. Scudder.
Newport	Stevens	2,400	1	29.2	.....	54	1	3	12	39	3.76	.....	.72	17.5	13	7	7	16	e.	Chas. M. Talmadge.
Nighthawk	Okanogan	3,050												6.7						Steve Nagy.
North Head	Pacific	211	9	46.6	− 1.1	58	1	27	11	15	7.55	+ 1.22	2.27	1.6	25	2	3	25	nw.	U. S. Weather Bureau.
Northport	Stevens	1,350	12	29.4	.....	50	1	6	27†	27	2.46	+ 0.06	.49	13.5	15	15	4	11	.....	W. F. Case.
North Yakima	Yakima	1,070	2	37.8	.....	67	18	5	11	32	.04	.....	.02	0.7	3	17	9	4	nw.	Albert Bender
Nutland	Klickitat		2	41.0	.....	66	3	12	11	32	.35	.....	.14	0	4					Ruth J. Shepard.
Odessa	Lincoln	1,540	8	31.6	.....	57	3	− 3	11	35	.96	.....	.30	7.0	6	3	5	22	sw.	Wm. N. Neeley.
Olga	San Juan	50	21	43.4	− 1.0	55	5	16	11	16	6.41	+ 1.45	1.46	6.0	19	1	15	14	sw.	Cecil S. Willis.
Olympia	Thurston	200	33	44.2	− 0.2	60	24	16	11	24	9.89	+ 1.29	1.97	3.5	19	0	8	22	sw.	M. O'Connor.
Omak	Okanogan	850	2	31.0	.....	62	4	2	11	38	.44	.....	.....	4.0	5	11	9	10	n.	St. John Umbrite.
Oroville	do	922	2																	
Parker	Yakima																			
Peola	Garfield	5,000	2								3.59	.....	1.00	16.1	17	9	6	15	sw.	Samuel Gruell, sr.
Pomeroy	do	1,500	19	40.8	− 1.2	62	20	9	11	40	1.21	− 1.36	.25	4.5	9	2	13	15	w.	Peter McClung.
Port Crescent	Clallam	259	16	40.5	− 1.8	56	17	13	11	20	6.39	− 1.06	1.56	13.0	20	0	12	18	s.	U. S. Weather Bureau.
Port Townsend	Jefferson	80	21	43.5	− 1.6	57	15	17	11	15	1.81	− 0.97	.90	0.5	12	2	6	22	sw.	Frank Plummer.
Pullman	Whitman	2,550	19	35.6	− 2.9	55	20	6	11†	28	3.46	+ 0.11	.81	9.0	11	8	4	18	sw.	State Agricultural College.
Queets River	Chehalis			44.1	.....	59	1	19	11	18	21.52	.....	5.60	0.3	24	4	4	22	w.	C. A. Bullard.
Quiniault	do	300	4	43.5	.....	61	3	18	11	25	27.79	.....	4.71	9.0	24	7	6	17	w.	A. V. Higley.
Republic	Ferry	2,628	11	27.4	− 6.1	57	2	− 15	11	41	.98	.....	.30	9.0	9	8	5	17	nw.	George B. Stocking.
Rex Creek	Chelan	1,135	4	33.7[j]	.....			12[j]	10	22[j]				26.0		4[j]	1[j]	13[j]	nw.	James W. Nicol.
Ritzville	Adams	1,825	12								1.13	− 0.16	.30	.....	9					Agent N. P. Ry.
Robertsville	Klickitat			35.8	.....	57	2	− 1	11	32	4.43	.....	.91	23.0	15	6	22	2	.....	R. R. Conger.
Rock Lake	Whitman	1,910	5	33.8	.....	59	20	− 8	11	38	2.21	.....	.55	9.0	7	13	8	9	sw.	P. M. Ramsey.
Rosalia	do	2,425	19	35.8	− 2.1	56	20	3	11	31	2.24	− 0.92	.45	7.0	14	9	8	13	sw.	Hans Mumm.
Russels Ranch	Yakima	2,870	2								4.27	.....	1.25	20.4	12	9	10	11	w.	Mrs. Adella Russell.
Seattle	King	123	20	44.7	+ 0.2	57	7	22	11	16	3.26	− 2.60	1.01	3.0	19	1	8	21	s.	U. S. Weather Bureau.
Sedro-Woolley	Skagit	38	14	41.4	− 2.8	55	1†	8	11	24	13.52	+ 6.30	2.09	3.0	21	3	11	16	.....	Mrs. H. L. Devin.
Sixprong	Klickitat	1,240	4	35.0	.....	62	5	7	11	28	.46	.....	.23	1.0	5	9	2	19	sw.	C. E. Comstock.
Skagit Power Dam	Whatcom	510	1																	
Snohomish	Snohomish	100	17	39.1[e]	− 5.6	61[b]	1†	8	11	24[f]	4.03	− 2.48	.80	4.0	11	0	10	20	nw.	A. M. Richardson.
Snoqualmie Falls	King	667	12	42.4	.....	55	7†	13	11	20	8.65	− 0.61	1.48	3.0	20	7	6	17	.....	O. N. Wiswell.
Snoqualmie Pass	Kittitas	3,000												84.5						C. E. Ingraham.
Snyders Ranch	Okanogan	2,200	2	27.4	.....	66	3	− 12	11	39	3.14	.....	.75	25.5	10	11	17	2	sw.	G. M. Snyder.
South Bend	Pacific		16	45.2	− 2.5	60	2	19	11	18	20.81	+ 6.69	6.00	T.	24	1	6	23	w.	Mrs. W. E. Buckingham.
Spokane	Spokane	1,943	30	35.0	− 2.3	56	3	8	11	31	2.58	+ 0.28	1.06	18.0	14	2	10	18	sw.	U. S. Weather Bureau.
State University	King	170	2	44.0	.....	56	7	23	11	16	3.11	.....	.71	0.3	18	5	3	22	s.	University of Washington.
Stokes Ranch	Okanogan	2,670	2								2.12	.....	.57	23.8	10	8	15	6	nw.	Chas. W. Gunn.
Sumner	Pierce	77	3	43.5	.....	60	7†	11	11	27	4.87	.....	.81	1.7	20	5	3	22	n.	H. E. Thompson.
Sunnyside	Yakima	740	16	39.4	− 0.4	66	5	12	28	38	.09	− 0.91	.05	0.7	4	8	19	3	sw.	U. S. Reclamation Service.
Tacoma	Pierce	213	25	43.8	− 0.3	56	24	19	11	18	5.44	− 3.09	1.44	2.9	20	2	4	24	sw.	U. S. Weather Bureau.
Tatoosh Island	Clallam	86	26	45.2	− 0.7	54	3	25	11	16	11.12	− 0.97	2.81	11.8	24	2	5	23	ne.	Do.
Tieton	Yakima	2,000	2	35.1	.....	59	3	− 1	11	26	2.57	.....	.60	11.8	13	9	8	13	w.	U. S. Reclamation Service.
Tonasket	Okanogan	945																		
Touchet	Walla Walla	556	4	39.6	.....	68	3	9	10	43	.38	.....	.25	T.	3	10	10	10	sw.	D. W. Dorrance.
Touchet Ridge	Columbia	2,500	2								11.60	.....	1.90	18.0	13	6	7	17	sw.	R. H. King.
Trinidad	Douglas	900	7	36.8	.....	66	18	2	11†	46	.30	.....	.20	3.0	2	14	9	7	s.	J. C. Wheeler.
Vancouver	Clarke	100	36	45.3	0	64	1	19	11	25	2.28	− 3.25	.40	0.7	18	3	8	19	sw.	A. A. Quarnberg.
Vashon Island	King	40	22	43.5	− 1.5	58	7	20	11	15	6.34	− 0.84	1.83	T.	22	1	2	27	s.	Gertrude McClintock.
Wahluke	Grant	410	7	38.7[i]	.....	66[a]	5	8[a]	11	33[a]	.20	.....	.20	2.0	1	7[a]	13[a]	9[a]	.....	F. C. Koppen.
Wallace	Okanogan	4,000	2								.81	.....	.14	11.7	11	2	18	10	s.	Geo. A. Wallace.
Walla Walla	Walla Walla	1,000	27	41.4	− 1.5	63	3	10	11	30	1.10	− 1.03	.29	1.5	12	9	4	17	s.	U. S. Weather Bureau.
Washougal	Skamania	650	11	44.0	− 1.9	60	1†	19	11	22	5.63	− 3.17	.92	T.	18	9	2	19	w.	F. M. Grout.
Waterville	Douglas	2,624	21																	
Wenatchee, near	Chelan	1,169	12	33.4	− 4.0	60	18	− 1	11	40	1.03	− 1.17	.34	6.0	6	6	17	7	w.	George A. Pitcher.
White Salmon	Klickitat	325	....	42.4[d]	.....	62[d]	3	17[c]	11†	26	5.37	.....	.86	11.7	18	7	5	18	w.	C. W. J. Reckers.
Wilbur	Lincoln	2,203	12	30.5[c]	− 5.4	57[c]	3	− 6[c]	10	46[c]	.82	− 0.94	.37	4.0	8	9[c]	2[c]	14[c]	se.	Rollin J. Reeves.
Wind River	Skamania	1,300	....	49.0	.....	61	2	11	11	34	14.55	.....	2.55	13.2	20	5	6	19	w.	U. S. Forest Service.
Winthrop	Okanogan	1,765	....	27.0	.....	60	3	− 5	11	35	1.72	.....	.59	15.7	9	6	14	10	.....	Methow Trading Co.
Yale	Cowlitz	375	4	42.8	.....	65	1	15	11	30	16.97	.....	2.10	14.5	20	7	8	15	sw.	J. A. Williams.
Zillah	Yakima	800																		
Zindel	Asotin	715	9	39.2	.....	61	8	16	17	29	.76	.....	.18	1.5	5	17	8	5	n.	M. W. Zindel.
Oregon.																				
Albany	Linn	212	30	44.0	− 1.2	64	2	22	11	26	3.35	− 2.73	0.50	2.5	17	2	3	25	s.	F. M. French.
Ashland	Jackson	1,963	28	43.1	− 1.8	65	17†	26	11	28	2.06	− 0.38	1.15	1.0	4	4	9	17	nw.	G. G. Eubanks.
Astoria	Clatsop	16	51	46.9	− 0.3	61	2	25	11	17	11.91	+ 0.86	2.75	0	23	5	4	21	sw.	Irving Club.
Baker	Baker	3,466	21	32.6	− 2.3	55	3	− 2	11	32	1.45	+ 0.27	0.75	8.0	14	10	4	16	se.	U. S. Weather Bureau.
Bay City	Tillamook	14	17	47.3	− 1.9	61	1	25	11	26				2.2	22	3	5	22	se.	John O. Bozarth.
Beech Creek	Grant	4,500	....	31.6	.....	54	3	3	11	26	2.18	.....	0.72	20.5	8	12	2	16	n.	G. G. Carson.
Bend	Crook	3,629	29								0.78	.....	0.25	2.5	4	19	10	1	sw.	Bend Bulletin.
Black Butte	Lane	1,200	10	41.4	.....	57	2†	23	11	24	6.50	− 1.90	1.00	9.0	14	12	4	14	nw.	Wm. Harris.
Blalock	Gilliam	237	13	44.3	− 0.9	68	5	19	11†	27	0.17	− 1.63	0.09	T.	2	10	4	16	w.	Geo. W. Long.
Brogan	Malheur	2,600	....	36.8	.....	68	3	9	11	33	0.29	.....	0.29	0	1	14	5	11	e.	A. B. Cox.

TABLE 1.—*Climatological data for November, 1911. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon—Continued.																				
Burns	Harney	4,157	20	35.8	+ 1.4	61	1	6	28	42	0.72	− 0.87	0.22	4.0	7	18	6	6	.....	J. C. Welcome, jr.
Cascade Locks	Hood River	100	21	43.4	− 1.9	61	1	22	11	23	11.95	+ 0.14	1.84	5.5	22	8	2	20	w.	Val. W. Tomkins.
Cazadero	Clackamas	503	2	46.0	.....	65	1	26	11	32	5.15	.....	0.74	0.8	20	6	1	23	se.	Alf. Drill.
Cliff	Lake	4,300	4	33.2	.....	65	3	− 11	11	52	0.41	.....	0.33	0.5	3	8	10	12	nw.	John C. Green.
Condon	Gilliam	2,884	4	37.6	.....	60	3	6	11	32	1.02	.....	0.32	5.5	11	7	5	18	w.	C. H. Williams.
Corvallis	Benton	266	23	44.4	− 1.3	62	1†	26	28	31	4.58	− 2.24	0.99	1.5	15	2	8	20	w.	Oregon Agricultural College.
Crescent	Klamath	4,400	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	A. M. Caisse.
Dayville	Grant	2,200	17	41.0	− 1.5	66	14†	12	11	40	0.98	− 0.30	0.56	1.0	5	12	10	8	ne.	Dr. J. Campbell-Martin.
Deadwood	Lane	350	1	46.4	.....	65	1	29	11	25	13.37	.....	2.61	.....	16	7	10	13	nw.	Jos. Slemmons.
Doraville	Columbia	600	10	42.4	− 1.5	59	7	13	11	18	8.12	− 1.46	1.28	9.5	23	1	6	23	nw.	Jos. Hackenberg.
Drain	Douglas	300	9	46.2	.....	63	1	26	11	21	5.89	.....	0.91	2.7	17	2	15	13	sw.	Ira Wimberly.
Echo	Umatilla	625	7	42.2	.....	68	3	13	12	38	0.64	.....	0.30	3.0	6	11	2	17	w.	R. B. Stanfield.
Ella	Morrow	830	7	38.8	.....	65	17	6	11	32	0.65	− 0.83	0.27	3.0	5	18	7	5	sw.	Carl F. Troedson.
Eugene	Lane	449	21	45.6	− 1.0	64	19	23	11	24	3.67	− 1.52	1.50	.....	13	2	8	20	w.	F. L. Barker.
Fairview	Coos	142	15	45.4	− 3.9	65	3†	30	22	26	10.15	− 1.27	2.08	1.0	16	9	5	16	w.	Wm. Bettys.
Falls City	Polk	355	14	44.8	+ 0.1	65	1	23	11	33	7.01	− 8.92	1.90	0	18	7	5	18	w.	Chas. F. Vick.
Forest Grove	Washington	220	22	45.6	+ 1.1	66	1	20	10	34	3.80	− 5.38	0.75	0.7	15	1	8	21	nw.	Pacific University.
Gardiner	Douglas	72	21	49.5	− 0.2	64	1	31[d]	10	24[d]	7.56	− 3.17	1.00	0	13	8[c]	1[c]	18[c]	.....	J. S. Gray.
Glendale	....do	1,441	7	46.6	.....	70	3	23	30	30	2.37	.....	0.85	6.0	9	11	3	16	nw.	B. J. Simpson.
Glenora	Tillamook	575	20	42.4	− 1.2	58	2†	19	11	30	20.62	− 5.62	2.60	16.0	22	4	4	22	sw.	Mrs. Jennie A. Reeher.
Granite	Grant	4,680	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	L. N. Ford.
Grants Pass	Josephine	956	23	43.6	− 1.0	69	2	21	28	41	2.55	− 2.03	1.30	0.5	11	5	8	17	nw.	John B. Paddock.
Grass Valley	Sherman	2,581	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Agent, O. W. R. & N. Co.
Headworks	Clackamas	719	9	40.8	.....	58	1	22	11	19	9.05	− 2.53	1.03	1.5	20	7	3	20	se.	Portland Water Works.
Heppner	Morrow	1,950	21	41.2	− 2.5	67	3	11	11	33	0.93	− 0.41	0.24	6.2	11	10	8	12	nw.	Frank Gilliam.
Hermiston	Umatilla	451	4	41.4	.....	67	3	10	28	40	0.25	.....	0.15	T.	3	17	13	0	.....	C. W. Kellogg.
Hermoso Rio	Crook	2,300	....	39.0	.....	60[c]	3	11[c]	11	34[c]	2.67	.....	0.63	4.0	10	8[c]	9[c]	10[c]	e.	Carl T. Hubbard.
Hood River	Hood River	300	21	...	...	...	...	...	...	...	2.25	− 3.64	...	8.0	...	...	...	...	...	H. L. Hasbrouck.
Huntington	Baker	2,165	10	39.2	.....	68	1	14	11†	44	0.08	− 1.10	0.02	0.2	5	8	7	15	e.	L. Connell.
Jacksonville	Jackson	1,640	23	41.7	− 2.3	66	3	25	11†	31	1.85	− 1.96	0.78	1.5	9	13	2	15	.....	E. Britt.
Joseph	Wallowa	4,400	22	31.4	− 0.8	55	20	− 3	11	40	1.86	− 0.13	0.53	16.0	8	10	5	15	s.	F. F. McCully.
Klamath Agency	Klamath	4,169	3	27.6	.....	70	3	− 1	11	54	3.20	.....	1.50	17.0	7	15	5	10	nw.	Edson C. Watson.
Klamath Falls	....do	4,100	22	35.0	.....	60	3	14	12	28	0.87	.....	0.40	6.0	3	10	1	19	nw.	W. H. Heileman.
La Grande	Union	2,784	24	37.4	− 3.4	60	3	9	12	33	3.00	+ 0.85	0.41	8.3	17	10	5	15	w.	W. A. Worstell.
McKenzie Bridge	Lane	1,400	10	39.5	− 3.0	75	2	17	11	53	13.19	+ 0.54	1.82	7.0	22	3	4	23	sw.	Geo. Frissell.
McMinnville	Yamhill	182	24	44.4	− 0.8	63	1	26	11	30	3.77	+ 4.71	0.86	3.8	20	12	1	17	s.	M. E. Pettit.
Marshfield	Coos	34	10	47.8	.....	65	1†	27	11	32	7.11	.....	1.03	0	18	...	...	...	sw.	U. S. Weather Bureau.
Medford	Jackson	1,425	....	43.4	.....	70	2†	21	30	40	1.67	.....	0.85	2.0	11	10	9	11	.....	Do.
Merrill	Klamath	4,070	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Mrs. Agnes Ritchson.
Metolius	Crook	3,600	....	42.2	.....	67	20	10	10	40	0.73	.....	0.62	0.5	3	14	5	11	sw.	W. E. Lottman.
Mikkalo	Gilliam	1,400	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Frank Little.
Miramonte Farm	Clackamas	195	23	44.9	+ 1.3	62	1	24	11	28	3.32	− 4.57	0.71	0.5	20	7	4	19	sw.	G. Muecke.
Monroe	Benton	350	14	45.4	− 1.0	65	7	21	28	29	5.60	− 3.97	1.40	3.0	11	4	5	21	sw.	L. A. Peek.
Mount Angel	Marion	485	25	46.2	+ 0.8	61	1	27	11	22	3.24	− 4.09	0.42	1.0	18	8	3	19	sw.	Dr. Urban Fisher.
Mount Hood	Hood River	1,650	1	40.8	.....	64	2	9	11	36	4.37	.....	0.77	12.0	13	7	10	13	w.	S. G. Babson.
Musick	Douglas	5,000	2	37.7	.....	59	1†	12	11	25	18.42	.....	2.55	77.0	17	12	3	15	sw.	Alex. Lundberg.
Newport	Lincoln	69	24	49.1	+ 0.1	61	1	28	11	21	6.60	− 4.87	1.09	0	21	3	10	17	sw.	Wm. Matthews.
Paisley	Lake	4,500	8	37.8	.....	58	3	14	11†	36	0.14	.....	0.14	0.2	1	17[a]	4[a]	8[a]	w.	E. C. Woodward.
Paulina	Crook	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Orrin C. Mills.
Pendleton	Umatilla	1,070	22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	E. F. Averill.
Pilot Rock	....do	1,817	3	41.8	.....	60	3	9	11	38	1.38	.....	0.48	8.5	11	13	2	15	sw.	John P. McManus.
Pompeii	Clackamas	3,879	16	36.3[b]	− 0.5	62	2	...	...	...	18.17	+ 4.19	2.00	31.3	20	8	5	17	sw.	E. Coalman.
Portland	Multnomah	57	41	46.0	+ 0.4	63	1	24	11	18	2.64	− 3.83	0.84	2.2	18	0	5	25	sw.	U. S. Weather Bureau.
Port Orford	Curry	80	6	48.0	.....	69	1	30	10	26	8.51	.....	1.28	0	13	14	1	15	s.	J. D. Loucks.
Prairie City	Grant	3,425	....	35.8	.....	57[b]	3†	13[b]	11	34[b]	1.70	.....	0.24	0.5	12	11[c]	3[c]	13[c]	nw.	A. M. F. Kirchheiner.
Prineville	Crook	2,864	15	38.6	+ 0.2	64	20	8	11	41	0.61	− 0.48	0.59	2.0	3	15	11	4	sw.	Geo. Summers.
Prospect	Jackson	2,800	5	39.6	.....	72	2	18	11	46	8.98	.....	1.73	16.0	12	8	10	12	s.	E. F. Graham.
Ramsey	Wasco	1,350	10	38.2	.....	64	3	4	11	30	0.91	.....	0.27	6.5	8	8	4	18	w.	Mrs. Iva B. Collins.
Range	Grant	3,500	3	33.8	.....	58	2	4	12	39	2.73	.....	0.80	16.0	10	11	3	16	.....	Mrs. Emma Arbuckle.
Redmond	Crook	...	10	39.8	.....	63[b]	2†	7[b]	11	42[b]	...	...	...	...	...	15[b]	7[b]	6[b]	w.	E. E. Foote.
Richland	Baker	2,350	10	36.2	− 2.4	58	1†	12	11	37	0.99	.....	0.60	T	3	9	7	14	w.	L. G. Morgan.
Riverside	Malheur	3,000	12	35.1	− 1.3	65	+ 3	− 1	11	51	0.90	+ 0.05	0.25	2.5	4	14	9	7	w.	Mrs. Leah Fairman.
Roseburg	Douglas	510	32	45.0	− 0.6	60	5	25	11	23	3.18	− 1.19	0.75	3.0	15	3	13	14	s.	U. S. Weather Bureau.
Salem	Marion	120	21	46.3	− 0.7	61	3	27	11	25	1.97	− 4.83	0.44	1.0	15	3	2	25	sw.	M. P. Baldwin.
Siskiyou	Jackson	4,115	3	30.2	.....	64	1†	18	11	27	3.59	.....	1.48	15.8	12	5	11	14	s.	U. S. Weather Bureau.
Sparta	Baker	4,150	20	33.2	− 3.1	61	1	2	11	29	2.57	− 0.18	0.80	31.0	13	9	5	16	w.	J. A. Wright.
Stafford	Clackamas	400	15	45.4	+ 0.1	67	2	20	11	31	3.90	− 6.15	0.85	0	20	...	...	...	sw.	John P. Gage.
The Dalles	Wasco	112	37	42.8	+ 0.6	66	3	16	11	34	1.19	− 1.06	0.43	2.0	7	11	4	15	sw.	S. L. Brooks.
Toledo	Lincoln	75	21	45.4	− 2.8	68	1	26	11	36	10.10	− 2.31	1.40	1.5	17	11	9	10	sw.	C. B. Crosno.
Umatilla	Umatilla	340	23	42.2	+ 1.1	64	18	19	11	36	0.41	− 0.76	0.20	T.	3	10	1	19	sw.	Mrs. Helen T. Duncan.
Union	Union	2,787	....	37.2	.....	65	3	10	11	40	1.68	.....	0.49	3.5	15	10	8	12	nw.	Geo. Rieben.
Vale	Malheur	2,242	19	35.8	− 1.3	62	1	10	28	42	0.80	− 0.18	0.42	T.	7	12	16	2	ne.	H. P. Osborne.
Wallace Orchard	Polk	170	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Chas. A. Park.
Wallowa	Wallowa	2,935	8	34.6	.....	60	1	− 6	11	41	1.77	.....	0.25	10.7	16	6	2	22	nw.	L. J. Coverstone.
Wamic	Wasco	1,500	10	38.8	.....	65	3	5	11	41	0.86	.....	0.40	2.5	4	...	...	...	w.	A. J. Swift.
Warmspring	Crook	1,500	9	43.0	.....	68	25	7	11	35	0.70	.....	0.57	T.	3	9	11	10	nw.	Claude C. Covey.
Wasco	Sherman	1,263	4	40.0	.....	62	4†	8	11	27	0.76	.....	0.20	5.0	7	8	12	10	w.	J. R. Howell.
Westfall	Malheur	3,000	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	H. M. Gilliam.
Weston	Umatilla	1,800	19	42.8	.....	70	4†	2	11	54	1.79	.....	0.40	5.5	12	6	9	15	sw.	M. A. Baker.
Williams	Josephine	1,368	19	42.8	− 2.3	74	8	18	8†	56	2.71	− 3.46	1.32	1.0	7	16	7	7	w.	Francis J. LeRoy.
Yonna	Klamath	4,146	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Jacob Ruecke.

a, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1911. District No. 12, Columbia Valley.*

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Montana.																																
Anaconda	Missoula			T.	T.	.15			.07	.21	*	.31	T.		T.							T.				T.	.09					0.83
Butte	do			T.	.10	.25		.05	.10	.20	.10			T.	T.	.05						T.				.10	T.					0.95
Columbia Falls	Flathead		.18	.30	.30	.13	.07	.30	.02	.07	.07		.25	.44	.24				.20	.30	.08						.40					3.35
Como	Bitter Root			.22	.01	.38	.02	.15	.19	.21	.09	.16	.28	T.	.28				.01							.13						2.13
East Anaconda ‖	Missoula			.01	T.	.02				.35	.15	.07	.01	T.	.05	T.	T.	T.	T.			T.				.05	.07					0.78
Fortine	Kootenai			.03	.09	.09			.28	.04			.11	.49	.21				.40	.35						.03					.04	2.16
Hamilton	Bitter Root							.34		.15	.20	.08		.10	.18																	1.05
Hat Creek	Missoula			T.	T.	.03	.23	T.	.10	.34	.10	.04			T.			T.		.14		.03				.37	.19					1.57
Kalispell	Flathead			.10	.13	.08		.13	.30	.06	.02		.68	.14			T.	.01	.26	.26						.27	.05					2.49
Libby	Kootenai			.03	.02	.10		.15	.11	.13	T.		.47	.36	.27			T.	.12	.11						T.			T.			1.87
Lost Creek	Missoula				T.				T.	.16	.08																.06					0.30
McGinnis Meadows	Kootenai																															
Missoula	Missoula			.04	.15	.02				.11	.05	.02		.03	T.					T.						T.	.14	.02				0.58
Ophir	do	T.		T.		.02	.10	.05	.05	T.			.10	.20	.30			T.	T.			T.				.22	T.					1.04
Ovando	do																															
Philipsburg	do			T.	.10		.10		.06	.10	.40		T.	.35								T.					.10	.10				1.31
Plains	Columbia					.53	T.			.50	.05		.50		T.			.12	.20	.20				.40								2.50
Pleasant Valley	Kootenai			.06	.02	T.			.20	.30	.20			.30	.30		.55	.70	.60	.18					.06	.15		.05			3.67
Polson	Flathead					.19				.30	.18	.35			.40					.22							.30	.10				2.04
Proctor	do																															
Saint Ignatius	do			.10	.13	.06			.32	.40	.10	.06	T.	T.						.07						.31						1.55
Saint Regis	Missoula																															
Saltese	do			.11		.37		.55	.15	.50	.32	.42	1.12	.48	.23			.47	.38	.70						.90						6.70
Stevensville	Bitter Root				.12	T.	.15			.25	.14	.03	T.	.08	.05	.01	T.			T.	T.						T.					0.83
Thompson Falls ‖	Columbia			.01	.05	.23	.03	.50	.32	.09	.03	.16	.21	.42	.03			.48	.22	.40	.01					.07	.36					3.62
Willow Glen Stock Farm.	Missoula	T.				T.		T.	.50	.10	T.			T.	T.												T.					0.60
Wyoming.																																
Afton	Snake				.03	.15	.05	.04	.03	.09	.40			.10	.06	.02	.05	.12	.03	.05							.17					1.39
Alta	do				.21	.08		.25	.11		.16			.25	.15		.13	.18	.20							.15					1.87
Bechler River	do			.05	.60	.10		.20	.30	.25	.20	.40		.50	.30	.35	.25	.20	.40		.17					.20		.01			4.48
Bedford	do											.29	.20	.15		.21		.28								.24					1.37
Moran	do					.23	.27	.11	.11	.30	.40			.56	.60	.65		.21	.09							.01						3.54
Snake River	do				.18	.33		.30	.20	.20	.15	.10		1.75	.50	1.50	.20		.08	.04						.07						5.60
Nevada.																																
San Jacinto	Snake					.03		.07	.60	T.	T.		.10			.08	.05															0.93
Utah.																																
Standrod	Raft				.03			.13	T.	.17	.28			.02		.03	.31	T.								.07						1.04
Idaho.																																
Albion	Snake				.06			.11	.26	.17	.69	.07		.07	T.	.15	.20	T.	T.							T.						1.78
Almo	do						.18		.40	.30						.05		.05								.10						1.08
Alpha	Payette																															
American Falls	Snake				.22	.08		.26	.41	.45	.41					.19	.21									T.						2.23
Arrow Rock	Boise																															
Blackfoot ‖	Blackfoot			.15	.50	T.		.33	.25	.35	T.		.04	T.	.16	.35	T.					T.				.07					2.20
Blackfoot Dam	do				.35	.17	.02	.17	.10	.20	.32	.05		.10	.11	.03	.25	.05									.15					2.07
Bock's Ranch	Boise				.05		.17	.38	.29	.37	.27	.01		.23	.33	.51	.20										.12					3.53
Bogus Creek	Payette				T.	.42		.18	.62	.11	.26			.22	.38	.70	.04	.02	T.								.22					3.17
Boise	Boise			T.	T.	.26		.29	.06	.06	.30	T.		.06	.19	.42	T.	T.	T.	T.						.06	T.					1.70
Bonner's Ferry	Kootenai			T.	.10	.46	.06	.34	.16	.05			.44	.60	.10			.04	.06	.18	.05					.06					.08	2.78
Boulder Mine	Boise				.05	.21	.16	.44	.45	.18	.47	.02		.61	.71	.70	.39	.10	.07								.17					4.73
Buhl	Snake				T.	.02		.02	.02	.02	.03	T.		T.	T.	.02	.01	T.									T.					0.14
Caldwell	Boise				.02	.14	.14	.16	.05	.05	.15			.05		.42	.03		T.								.08					1.29
Camas	Lost River Region.							.41	T.	T.	.08	T.	T.														.14					0.63
Cambridge	Weiser					.22					.41			.25		.76		.02	T.								.05					1.71
Cedar Creek Dam	Snake				.02	.08			.44	.21	1.05					.09											.23					2.12
Chesterfield	Port Neuf				.10	.20		.22	.25	.23		T.	.21	.24	T.	.10		.20	T.	T.												1.75
Clyde	Lost River Region.																															
Council	Weiser												•																			
Culdesac	Clearwater			.03												.95			.28													1.49
Deary	do																															
Dent	do			T.	T.	.76		.55	.25	.18	.12		.09	.80	.78		T.	.42	.40	.34					.39	.06				T.	5.14
Driggs	Snake			T.	.10	.15	T.	T.	.11	T.	.36	T.		.24	.10	.11	.07	.08	.04							.10						1.46
Emmett	Payette					.16	.14				.08	.20		.60	.04	.48	T.	T.	T.								.02					1.72
Forney	Salmon							.08				.23					.22															0.71
Garden Valley	Payette					.55	.30	.42	T.	.38			.44	.12		.24							.18									2.65
Garnet	Snake				.04						.03					.12	.18									.20						0.37
Glenns Ferry	do				T.	.10	.12	.09	.05	.20				.30	.10	.15	.12															1.23
Gooding	Wood-Malad				.05	.06	.22	.13	.13	.48	.38			.30	.01	.38	.01															2.15
Grand Forks	St. Joe																															
Grandview	Snake				.09	.03	.03	.23	.03	.11	.03				.02	.11	.05			T.												0.73
Grimes Pass ‖	Boise				.07	.45	.26	.23	.46	.40	.14		.33	.35	.46	.42	.03	.03	T.							.18						3.81
Guffey	Snake				.06	.16	.07	.17	.01	.16	.17	.12	T.	.03	.04	.31	.11		.02	T.					.06							1.49
Hailey	Wood-Malad						.04	.04	.07	.08	.80			.25	T.	.28	.03															1.59
Hotspring	Bruneau				.05	.10		.08	.05	.06	.44				T.	.20	.05										T.					1.03
Idaho City	Boise					.55		.35	.45	.60				.56	.30	.55		.15								.05						3.56
Idaho Falls	Snake				.08	.10		.31		.30	.36			.02		.16	.06										.08					1.47
Indian Valley ‖	Weiser						.35	.18	.13	.03	.32			.23	.24	.42	.39	.03	T.	T.							.18					2.50
Irwin	Snake			T.	.20	.27											.12	.25				.20					.25					1.29
Kellogg ‖	Coeur d'Alene						.37	.17	.37	.27			.24	.31	.41		.03	.40	.33	.93	.47		.05				.65					5.00
Kirkham	Payette					.25		.60		.50				.43				.48		.20							.60					3.06
Kooskia	Clearwater				.20	.13	.10				.30	.08	.20	.10				.15	.10								.06					1.42
Lakeview	Pend Oreille			T.	.04	.05	.08	.20	.15	.18	.20	.15	.23	.13				.42	.40	.70	.08					.82						3.83
Landore	Snake			T.	T.	.22	.12	.20	.54	.30	.48	.08	T.	.45	.65	.70		.02	.31	.10		T.					.19						4.32
Lewiston	Clearwater			T.	T.	.15		.00	.03	T.	.04	T.	T.	.01	.08		.04		.08	.03	T.					.30						0.82
Little Camas	Boise					.38	.32	.44	.36	.46	.23			.59	.26	.30	.08										.07						3.49
Loon Creek	Salmon				T.	.08		.04	.05	.32	.34		T.	.25	.11	.16	.10	T.	T.								.05						1.50
Mackay	Lost River Region.			T.	T.				T.	.12	.07			.08		.20																0.47
Meadows	Salmon																															
Meridian	Boise				T.	.18	.05	.22	.00	.04	.18			.08	.12	.45	T.	.01	.01								.08						1.48
Mesa ‖	Weiser																															

TABLE 2.—*Daily precipitation for November, 1911. District No. 12*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Idaho—Continued.																														
Middle Fork	Clearwater			T.	.55	.25		.32	.30		.30	T.	.11	.18	.20		.15	.20	.35	.20		.10				.12	.25				.12	3.70
Milner	Snake								.31	.22	.31			.24		.59															1.67
Moscow	Palouse					T.			.15	.02	.03		.01	.50	.28		.05	.12								.40	.03					1.59
Mountainhome	Snake																															
Murtaugh [1]	do					T.	.10	.35		.16			.07	.05	.12		.60	T.									T.					1.45
Nezperce	Clearwater					.27		.10	.03	.03							.02	.02	.27													0.74
Oakley	Snake								.28	.15	.30					.03	.25															1.03
O'Hara Bar	Clearwater			T.	.48	.22	.20	.58	.20		.40	T.	.10	.40	.45		.13	.41	.30	.27	*	.10				.08	.30				.10	4.72
Orofino	do			.12	.02	.12		.24	.03	.18			.12	.62	.52		.12	.11	.56							.57	.12					3.45
Payette	Payette				T.	.11	T.	.09	.05	T.	.26			.04	T.	.47	T.		.01								T.					1.03
Peaceful Valley	Snake																															
Pebble	Port Neuf				.28	.30	T.	.22	.28	.35	.97	.13		.36	.12	.10	.26	.20	.01								.12					3.70
Pierson	Salmon				T.		.22	.21	.26	.72						.32															1.73
Pine	Boise					T.	.21	.40		.23	.30	.07		.40	.51	.23		T.									.09					2.44
Pleasant Valley	do				.01	.12	.13	.15	.04	.03	.22			.04	.12	.45	.03										.02					1.36
Pocatello	Port Neuf				.37	.06		.01	.23	.34	.41	.04		T.	.02	.27	.20	.02								T.	.05					2.02
Pocatello Nursery	do																															
Poplar	Snake																															
Porthill	Kootenai					.28		.19	.17	.12	.16	.10	.14	.10				.15	.33	.11	.07	.04	.20								.06	2.22
Powers Ranch	Boise				T.	.40	.40	.50	.31	.11	.30		.50	.50		1.00											.11					4.13
Pyle Creek	Payette					.29	.06	.46	.42	.20	.44			.40	.46	.91		.12									.26					4.03
Rattlesnake Creek	Boise				T.	.30	.12	.40	.19	.25	.60	.06		.38	.60	.62	.10	.05	T.								.10					3.76
Richfield	Wood-Malad				.05		.14	.08	.09	.61	.55			.42	.01		.19										T.					2.14
Roseberry	Payette																															
Roseworth	Snake					.07		.10	.07	.07	.34																	.01				0.66
Ruby Creek	Boise				T.	.57	.21	.45	.43	.22	.72	.10		.39	.61	1.05		.08	.03								.10					4.96
Rupert	Snake				.03		.18	.16	.28	.23	.24			.16		.33	.13										T.					1.74
St. Maries	St. Joe				.32	.19	.50	.05	.17	.07	T.	.23	.68	.22		.10	.09	.41	.17						.44	.18						3.82
Salmon	Salmon				T.			.12		.35			.40	.18		.38						.30									1.73
Salmon River Dam	Snake																															
Sandpoint	Pend Oreille			.12		.40		.98	.05	T.			.79	.67	.33			.36	.62	.47		.03				.55						5.37
Sheep Hill	Boise					.90		.42		.17	.70	.05		.57	.83	.79	.05	.08	.01									.15				4.72
Shoshone	Wood-Malad				.05	.04	.20	.20	.12	.62	.50			.39	T.	.35	T.										T.					2.47
Silver City	Owyhee				T.	.27	T.	.72	.40	.05	.12			.05	.11	.39	.21	.03									.09					2.44
Smith Prairie	Boise			.30			.50		T.	.60	T.	.29		.41	.25	.75	.10	.17														3.37
Soldier Creek	Wood-Malad					.04		.33	.12	.25	.98	.08		.66	.06	1.00	.10										T.					3.62
Spirit Lake	Pend Oreille			.08	.20	.14	.25	.84	.23	.73	.01		1.01	1.07	.14		.07		.17	.40		.10			.26						T.	5.70
Springfield	Snake				.12	.25	.12	.16	.18	.38	.04			.08			.27										T.					1.60
Sugar [1]	do			T.	.44			.20	T.	.04	T.		T.	.06	.14	.05						.06									0.99
Sunnyside	do					.10		.15	.06	.18	.13				.30	.25	.15										T.					1.32
Tripod Mountain	Payette					.45		.35	.26		.56			.30	.04	.10	.22	.04									.17					2.49
Twin Falls	Snake					.14	.06	.17	.20	.27	.31			.18		.40	.15															1.88
Vernon	do																															
Wallace	Coeur d'Alene			T.	.09	.33	T.	.50	.09	.42	.05	.01	.43	.84	1.18		T.	.96	.60	.62	T.	.10				.30	.31				.01	7.44
Weiser	Weiser					.13	.02	.06	.02	.01	.08			T.	.01	.42		T.	T.								.01					0.76
Wendell	Wood-Malad					T.		.14	.05	.40	.36			.15	T.	.29																1.39
Washington.																																
Aberdeen	Coast					.98	.86	.99	.28	.21	.16	.25	2.12	1.28	.82	.26	.62	1.14	4.07	1.31	.43	.12				1.06			.18		.08	17.22
Anacortes	Puget Sound				.16		.30		.20	.04	T.	T.	.20	.20	.52	.12	.15	.40	1.21	.40	.01					.46					.04	4.41
Baker	do		T.	.24	.11	.51	.28	1.83	.56	.18	.62		.44	1.23	.58	.28	.90	2.30	2.69	1.09	.08	.57				1.01					T.	15.50
Bellingham	do		.27	.06		.17	.43	.28	.15	.10			.32	.74		.09	.30	1.00	.43	.50		.13				.20				T.	.10	5.27
Bellingham (near)	do		.03	.24	.08	.19	.05	.45	.46				.42	.76	.45	.05	.31	.44	1.65	.57	.09	.05		.01		.60					.02	.06	6.98
Beverly	Columbia																															
Blaine	Puget Sound		.02	.28		.65	.31	.63	.04	.04	.06		.56	.34	.55	.20	.30	.38	1.10	.45	.27	.15				1.17					.25	7.75
Blewett	Wenatchee					.03	.10	.06	.05	.50	.30	.40	1.40	.90	.10		.12	.05	.06	.01	.03					.06						4.17
Bremerton	Puget Sound			.10			.14	.22	.04					1.74	.31				.50		.64	.06		.06		.30		.04		.04		4.19
Brewster	Columbia					.11	T.		.05				.30	.09												.06						0.61
Bumping Lake	Yakima					.01	1.20	.04	.45	.55	.25	.95	.15	.15		T.	T.	.01	.04		.02					.01	.09			.01		3.93
Cedar River	Puget Sound			.48		.47	.22		.19	T.	.17	T.	.65	.64	.67		.23	.40	.92	1.65	.14					.65		.10				7.58
Centralia	Coast		T.	.15	.67	.46	.26	.62	.32	.30	.50	.05	.78	.72	.58	.12	.28	.52	1.80	.41	.10	.13				.20			T.	.17	.03	9.17
Cheney	Spokane																															
Cle Elum	Yakima				.75	.20		.60	.22		.08	.38	.06	1.23			.27	.35	.18	.38	.12					.69	.05					5.56
Clearbrook	Puget Sound																															
Colfax	Palouse					.32								1.05			.07		.43							.27						
Colville	Columbia				T.	.28	.38			.76				.40	.25		T.			.32						.08						2.47
Conconully	Okanogan					.10	T.		.20					.10	.15	.24				.04						.05						0.88
Cowiche	Yakima							.01			.10	.02	.15	.05	.06											T.	.09					0.48
Crescent	Spokane		.03				.48				.87																					1.38
Davenport	Columbia	.01				.10		.28			T.		1.31				.01									.09						1.80
Dayton	do			T.	.05	.14		.15	.05	.04	.07	.02	.07	.40	.33		.03		T.		.11					.29	.04					1.79
Deer Park	Spokane			T.	.04	.24		.65		.21			.53	.58			.01		.01							.05						2.32
Detroit	Puget Sound			.01		.30	.35	.36	.08			T.	1.57	1.07	1.13	.07	.05	.36	1.52	.57	.15	.06		.05		.50				.17	.05	8.42
Dixie	Columbia				.32	.35	T.	1.15	.16	.15	.37	.15	.43	.35	.64		.25	.05		.86		.08				.78	T.				T.	6.09
Dryden	Wenatchee																															
Duckabush	Puget Sound								.10		T.	.40	.60	1.20			.05	.02	.25	.50	1.55											4.67
East Sound	do																															
Ellensburg	Yakima										.05		.20		T.											T.						0.25
Ephrata	Columbia																															
Forks	Coast			.27	.63	.51	1.26	1.52	.54	.10	.30	.25	4.14	.68	1.01	.51	.61	2.65	5.92	1.10	1.00			.38						.04		23.42
Fort Simcoe	Yakima								.01	.09	.20	.40	.20	.25												T.						1.15
Gerome	Columbia					.12		.48		.43			.44	.03												.03						1.53
Goat Lake	Puget Sound			.14	.19	.68	.81	2.33	1.55	1.32	.56	.04	.92	1.70	2.30	.78	.20	2.63	2.44	3.20	.82	.90				1.07	.92				.27	25.77
Gold Basin	do			.10	.25	1.50	.60	2.80	.67	1.40	.76	T.	1.10	1.85	1.40	T.	.75	2.35	3.30	1.80	.35					2.30					.30	23.58
Gold Creek	Yakima					.05		.09			.55			.50				.05	.13							.15						1.52
Goldendale	Columbia					.10		.13	.13	.10	.10	.10	.20	.20	.02		.01									T.						1.09
Granite Falls	Puget Sound																															
Grays River	Coast																															
Hatton	Columbia				T.	.09	.20			.02			.30				T.									.02						0.63
Huntsville	do							.40		T.	.13	.36					.25	.03								.27						1.44
Irene Mountain	do			T.		.29	.25	.02		.10	T.		.15	.05	.01			T.		.10						T.	.01					0.98
Kennewick	do						.09			T.		T.	T.		T.																	0.09
Kettle Falls	do			.02		.36	.05	.47	.07	.14			.37	.09					.05	.15						.09						1.86
Kiona	Yakima																															
Kosmos	Columbia			.09		1.02	.40	1.40	.66	.65		.11	.45	1.16	.43		.93	.42	1.57	1.51	.02	.12				.83				.11	.05	11.93
La Center	do		.20	.62	.17	.52	.27	.32	.30	.01	.01	1.27	.60	T.	.23	.31	.39	.40		.11					.13			T.	.17	T.		6.03
La Crosse	Palouse				T.	.27		.34	.05	T.	.03		.70	T.	.13		T.	T.	T.	T.						.28						1.80
Lake Chelaum	Yakima		T.	T.	.04	1.21	.72	1.64	.78	.01	.14	T.	1.24	.81	1.43	.16	.32	1.25	.83	1.17	.13	T.				1.04	.07	T.			T.	12.99
Lake Kachess	do			.05	.16	1.60	.33	1.65	.30	.50	.10		2.40	.20	1.10	.50	1.51	1.81	1.90	1.62	.07	.16				1.35	.08				T.	17.39
Lake Keechelus	do			.06	.08	1.10	.49	1.76	.79	.10	.30	T.	2.32	1.30	.24	T.	.32	.50	.91	.70	.02	T.				1.18	.03			T.		12.20

TABLE 2.—*Daily precipitation for November, 1911. District No. 12*—Continued.

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Washington—Contd.																																
Lakeside	Columbia					.14	T.	.04	.07	T.	T.		.24	.05	.11											.10	.06					0.81
Laurel	do					.15	.18	.42	.29	.29	.05	.01	.60	.25	.09		.08	.02			.09					.29					.03	3.44
Laurier	Kettle			.07	.03	.26	.07	.45	.05	.43			.15	.12				.55	.12	.15	.05	.03				.14						2.67
Lester	Puget Sound			.35	.40	.70	.25	1.30	.60		.02			.18	.12	.10	.50	.13	.18	.21											.30	5.34
Lone Tree	Coast			.13	.03	.42	.91	.31	.11	.14	.12	.40	3.03	1.02	.47	.41	.23	1.22	3.79	.59	.25	.07		.08	.01	.55			.12	.05	.12	14.58
Longmires Springs	Puget Sound																															
Lost Creek	Columbia					.10		.06	.07	.13	.04		.11	.10																		0.61
Lucerne	do																															
McConihe	do				.04	.05	.02	.03			.15		.10														.12					0.51
McCumbers Ranch	do					.10	.10	.60	.20	.10	.10		.60	.70	.80											.10						3.40
Moses Lake	do																															
Mottinger	do					.07		.12				T.	T.		T.												.20					0.39
Mount Pleasant	Coast		T.	.15		.05	T.	.40	.21	*	1.12	.05	.80	.03	.12	.03	T.	.10	1.42	.45	.05					.41			T.			5.39
Moxee	Yakima										.03	T.	T.																			0.03
Newport	Pend Oreille				.11	.30	T.	.71	T.	.14			.72	.70	.12		.03	.08	.09	.50						.20	.06						3.76
North Head	Coast			.06	.11	.19	.62	.26	.19	.14	.11	.50	1.15	.26	.14	.15	.07	1.56	1.09	.07	.07	.01		.07	.01	.53			.07	.09	.03	7.55
Northport	Columbia		.01	.08	.06	.17	.49	.08	.09		.20	.27	.09	T.	T.	.45	.16	.07	.02	T.						.22						2.46
North Yakima	Yakima					T.				T.	T.	.01	.01	.02												T.	T.					0.04
Nutland	Columbia						.09			.06	.14		.06																			0.35
Odessa	do					T.	.03	.29	T.		.30	.20	.20				T.	.03	T.							T.						0.96
Olga	Puget Sound			.23	.06	.22	.16	.21	.24	.10	.20	.30	.71	.66	.30	.16	.18		1.46	.44	.11					.61				T.	.06	6.41
Olympia	do					.31	.35	.61	.47	.14	.05	.14	1.19	1.68	.67		.17	.53	1.97	.86	.20	.40							.02	.08	.05	9.89
Omak	Okanogan					.11		.03	T.			*	*	.30																		0.44
Oroville	do																															
Parker	Yakima																															
Peola	Snake			.08	.05	.33		.28	.28	.52	.23	.10	.25	.01	.27		.06	T.		T.		.01				.10	1.00			.01	.01	3.59
Pomeroy	do					.10			.12	.10	.25		.10	.20	.05	T.	T.									.15	.14					1.21
Port Crescent	Coast			.07	.09	.03	.48	.06	.26	.20	.02	.57	1.15	.16	.23	.10	.08	.46	1.27	.62	.10					.39			.05		T.	6.39
Port Townsend	Puget Sound			.04		T.	.04	.12	.04	.05		T.	.01	.01		T.		.08	.90	.28	.02					.22						1.81
Pullman	Palouse					.33		.59	.42	.40			.50		.81		.03	.04	.06							.17	.11					3.46
Queets River	Coast	T.		.28	.02	.66	.73	1.30	.47	.16		*	3.77	.71	1.29	.71	.60	1.59	5.60	.62	.70	.15		.02	T.	1.64	.02	T.	.23	.03	.22	21.52
Quinlault	do			.20		.99	2.15	1.60	.85	.21	.20	.28	2.00	1.35	2.18	.35	1.38	3.00	4.71	2.44	.70	.35		.08	.01	2.23			.20	.18	.15	27.79
Republic	Kettle			T.		.30	.05	.06	.18	.04	T.		.20	.10					.03	.02						T.						0.98
Rex Creek	Columbia																			.67						.70						
Ritzville	do					.28	.30		.11	.10		.11	.12					.01	.02							.08						1.13
Robertsville	do			T.		.11	.23	.53	.35	.28	.24		.91	.70	.50	T.	.10	T.	.05	.01	.21	.05				.16						4.43
Rock Lake	Palouse					.15		.55	.31		.35		.50	T.			T.		.13							.22						2.21
Rosalia	do			.03	.02	.34	.05	.42	.06	.10	.05		.21	.45	T.		.05		.10	.03						.33						2.24
Russels Ranch	Yakima					.27	T.	.59	.51					.74	1.25	.02	.04	.26	.18	.07		.20				.14				T.	T.	4.27
Seattle	Puget Sound			.16	.03	.28	.05		.06		.12	.15	.98	.13	.10	.11	T.	.01	.33	.27	T.			.01		.30			.05	.11	.01	3.26
Sedro-Woolley	do			.22	.09	.59	.38	1.45	.18	.15	.15		.52	.69	.36	.12	.41	2.09	4.01	.55		.19		.01	.04	1.25					.07	13.52
Sixprong	Columbia					.05		.10		T.	.08		.12	.11																		0.46
Skagit Power Dam	Puget Sound																															
Snohomish	do				.30	.60	.49	.30	.20	.20			.70			.30	.20	.80	.03													4.03
Snoqualmie Falls	do		.03	.22	.42	.77	.09	.34	.23		.08		1.00	.84	.55		.36	.42	1.48	.85	.09					.79	.03			.02	.04	8.65
Snyders Ranch	Columbia					.13	.10	.21		.31			.57	T.	.75			.10	.17	.30	T.					.50						3.14
South Bend	Coast			.18	.09	.70	.72	1.37	.35	.26	.26	.10	2.20	1.72	1.37	.21	.52	1.33	6.00	1.65	.32	.13		.04		1.23			.02	.02	.02	20.81
Spokane	Spokane			.04	.02	.19	.24	.11	.20	.02	.11	.04	1.06	.31			.06		.06	T.	T.					.12						2.58
State University	Puget Sound			.02	.12	.18	.04	.03	.04	T.	T.		.66	.43	.09		.14	T.	.04	.71	T.	.01		.04		.33	.09			.05	.09	3.11
Stokes Ranch	Columbia			.01		.10		.30		.21			.57	.14	.54		T.			.15		.05				.05						2.12
Sumner	Puget Sound			.14	.15	.33	.13	.26	.21	.06	.03		.64	.41	.35	.01	.11	.29	.81	.45	T.	.03				.18	.17			.10		4.87
Sunnyside	Yakima						.02	.03			.03			.01																		0.09
Tacoma	Puget Sound			.03	.04	.19	.31	.04	.08	T.	.15	.11	1.13	.32	.30	.05	.03	.36	1.37	.44	.02			T.		.27			.03	.17	T.	5.44
Tatoosh Island	Coast		.03	.25	.17	.25	1.00	.02	.06	.26	T.	1.00	2.41	.50	.08	.29	.55	1.20	1.06	.38	.19			.01	.10	.54			.30	.11	.36	11.12
Tieton	Yakima					.04	.01	.38	.09	.09	.20	T.	.56	.33	.60		.07	T.		.07		.04				.09						2.57
Tonasket	Okanogan																															
Touchet	Columbia					T.	.06	T.	.07	T.	T.	T.		T.	.25		T.									T.						0.38
Touchet Ridge	do					.25	.75		1.50	.40	.50		.45		.65		1.90		.35		.80	1.40			1.45			1.20				11.60
Trinidad	do										.10		.20																			0.30
Vancouver	do				.04	.29	.24	.12	.24	.27	.04	.04	.40	.24	.03	.05	.06	.05			.04	.03				.04					.06	2.28
Vashon Island	Puget Sound	.01	T.	.01	.10	.30	.08	.13	.03	T.	T.		1.13	.66	.48	.03	.02	.09	1.83	.77	.03	.01	.01	T.	T.	.30	.05	T.		.15	.12	6.34
Wahluke	Columbia					T.							.20																			0.20
Wallace	Okanogan					.12	.04	.05	.03	.12	.04		.14	.10	.10					.05						.02							0.81
Walla Walla	Columbia			.04	T.	.23	.15	.14	T.	.05	.10	.08	.14	T.	T.	.01	.04	0	.02							.15					T.	1.10
Washougal	do				.60	.02	.43	.32	.40	.25	T.	T.	.50	.30	.35	.05	.40	.20	.25	.25	.05	.03				.10					.23	5.63
Waterville	do																															
Wenatchee (near)	do					.15	T.	T.	.04	T.	.13		.34	T.	.20					T.	T.					.17						1.03
White Salmon	do				.04	.13	.23	.86	.43	.36	.33	.37	.35	.45	.79		.19	.48	.03		.07	.08				.10					.03	5.37
Wilbur	do			T.	.15	.37			.07		.04		.12						.01	.01						.05						0.82
Wind River	do				.06	.86	.58	1.19	1.30	.43	.18		1.10	2.55	2.09	.02	.67	.31	1.12	.64	.21	.52				.59				.01	.12	14.55
Winthrop	do			T.		.11	.02	.12	.13	.02			.48		.59				T.	.11	T.	T.				.19						1.72
Yale	do	.05			.34	1.44	.65	2.10	.68	.50	.35	.22	1.40	1.89	1.56	.09	1.22	.35	1.14	1.20		.37				1.24				.18		16.97
Zillah	Yakima																															
Zindel	Snake										.15	.18	.11								.15					T.	.17					0.76
Oregon.																																
Albany	Willamette					.12	.03	.27	.28	.45	.12	.06		.50	.40	.33	.20	.05			.01	.02					.20			.01	.30	3.35
Allingham	Deschutes					.20	.01	.35	.36	.31	.23		.08	.15	.49	.83	.08	.03				T.				.18						3.36
Ana River	SE. drainage							T.		T.	.04	.02				.15																0.21
Ashland	Rogue					T.		.10	.01	.80	T.					1.15																2.06
Astoria	Columbia				.09	.06	.59	.88	.50	.33	.35	.22	.19	1.69	.99	.06	.14	.46	.34	2.75	.84	.10	.04	T.		T.	.91	T.		.01	.31	.06	11.91
Bagleys Ranch	Snake																															
Baker	do				T.	.03	.01	.13	.21	.08	.05		.01	.07	.30	.51	.01	.01	T.	.01		T.				.02						1.45
Bay City	Coast			.11	.12	.50	.55	.77	.50	.18	.15	.10			1.09	.10	.42	.92	.22	.45	.37	.23				.67			.09	.40	
Bear Creek	Deschutes					.05				.06	.07					.79	.13															1.10
Bear Valley	SE. drainage																															
Beech Creek	John Day					.17		.09		.21	.27	.11	T.	.30	.72	.31																2.18
Bellfountain	Willamette					.28	.20	.21	.66	.52	.45	T.	.39	.53	.61	1.26	.77	.08			.06	.15				.20	.01			.10	.04	6.52
Bend	Deschutes							T.	T.		.25			.10		.23	.20															0.78
Big Basin	John Day				.20	T.			.10	.10	.10				.10	.40																1.00
Black Butte	Willamette					.15	.55	.10	1.00	.70	.60	.30	.35	.15	.45	.90	.50					.55				.20						6.50
Blalock	Columbia					.09	.08			T.	T.	T.	T.																			0.17
Blue Mountain Sawmill	Umatilla					.70		.80	.15		.90	.40	.80	.25		.40		.10		.10		.05				.20						4.85
Brogan	Malheur					T.			T.		T.					.29																0.29
Buena Vista	Snake					.40		.30	.10	.20	.10		T.	.10	.20	.30			.20								T.						1.90
Burns	SE. drainage					.08	.02	.02	.09	.15				.22	.14																		0.72
Burns Mill	do					.15	.15			.20	.20	.03		.05	.31	.12																	1.21
Butte Falls	Rogue					.14	.01	.30	.29	.32	.80	.06		.36	.39	1.33	.50	.14				.05					.02						4.71
California Gulch	Umatilla					.10			.40		.30	.33			.30	.28					.04											1.75

TABLE 2.—*Daily precipitation for November, 1911. District No. 12.*

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Oregon—Continued.																															
Canyon City	John Day																														
Cascade Locks	Columbia				.12	.83	.55	1.22	.69	.76	.29	.10	.84	.80	1.84	.06	.93	.43	.06	.53	.12	.29	.02			.65	.04		T.		.18	11.95
Cascadia	Willamette				.02	1.84	.22	.37	1.08	.55	.42		.19	.26	.84	1.84	1.05	.11	.09		.10	.15				.26				.03		9.44
Cazadero	do				.10	.66	.42	.74	.50	.31	.20	.03	.29	.29	.66	.03	.23	.12	.03	.02	.04	.01				.27					.20	5.15
Christmas Lake	SE. drainage					T.		.18	T.	T.	.25					32										T.						0.75
Cliff	do					T.		.05		T.						33	.03															0.41
Columbia Mine	Snake				.56	.30		.40	.20	.50	.30	.10	.10	.90	.40	.70	.20	.10														4.76
Condon	John Day					.05	.01	.16	.07	.09	.32	.01	.17	.05		.08	.01									T.				T.	T.	1.02
Coquille River L. H.	Coast					.08	.14	.40	.23	.40	.20	.20	.50	.61	.50	.69	.50	.16								.20						4.82
Cornucopia	Snake				.09	.60		.85	.40	.30	.32		.08	.97	1.45	.82	.23	.29	.45	.18						.25	.11				.04	7.43
Corvallis	Willamette				.15	.04	.22	.38	.64	.23	.04		.99	.25	.42	.35	.10	T.	.01		T.					.32		T.		.44		4.58
Cracker Creek	Snake			T.	T.	.30		.40	T.	.40	.20	T.	T.	.50	.20	.70	.40	T.	.02	.02						T.	0.2					3.16
Crescent	Deschutes																														
Dayville	John Day					T.		.08	.14		.10					.56	.10									T.						0.98
Deadwood	Coast					.57	.39	.96	1.68	.68	.72		.68	1.36	2.61	1.72	.95	.08		.07	.30	.14				.46						13.37
Diamond	SE. drainage					T.		.21	T.	T.	.16	T.				.36	.04															0.77
Doraville	Columbia			.03	.12	.67	.32	.26	.59	.63	.31	.03	.56	.64	.53	.01	.25	.45	1.28	.74	.04	.33				.26	.01		T.	.05	.01	8.12
Drain	Umpqua					.10	.13	.51	.63	.73	.51	.03	.20	.60	.60	.91	.61	.03	T.		.05	.12				.10	.03					5.89
Dufur	Columbia					.01		.04	.03	.20	.24	T.	.15	.01	.04											.04						0.76
Duncan	Umatilla					.95	.80	.30	.15	.30	.60	.20		.30	.10	.15	.15	.50	.10		.10					.25					.10	5.05
Echo	do				.05			.05		T.	.15	.30	.04	T.	.05																	0.64
Ella	Columbia										.20	.10		.27		.06	.02															0.65
Embody	SE. drainage					T.	.55			.05	.51			.10	1.12	.10	.10															2.53
Eugene	Willamette						.27	.10	.26	.36	.35	.10	.10	.15	.16	1.50	.28					.02				.02						3.67
Fairview	Coast					1.05	.62	.93	.95	.35	.80	.25	.15	.62	.88	.64	2.08	.24			.12				.12	.35						10.15
Falls City	Willamette					.11	.13	.45	.32	.53	.15	.02	1.90	1.00	1.02	.06	.19	.23	.04		.23	.08				.38					.17	7.01
Fir Glen	Coast					.35	.27	.86	1.45	1.32	.82	.08	.20	.64	.86	.62	1.11	.09			.18	.17				.23	.01					9.26
Florence	do					.55	.28	.77	.25	.17	.54	.06	.44	.86	1.16	.72	.54			.16	.25	.04				.39	.03			.04	.03	7.28
Forest Grove	Willamette					.19	.22	.26	.23	.25	.20	.75		.72	.08	.29	.05	.12	.07							.31			.06			3.80
Fort Rock	SE. drainage					T.		T.	T.	.21						.27	.04									T.						0.52
Galice	Rogue							.12	.13	.80	.60	.05	.06	.48	.41	.75	.30															3.70
Gardiner	Umpqua				.51	.30	.73	.54	.61	.43			.54	.55	1.00	.79	.80				.30				.46							7.56
Glencoe	Columbia					.06			.12			.30				.08																0.56
Gibbon	Umatilla			T.	.05	.10	.03	T.	.05	.15				.40	.40	.03		.45										T.				1.66
Glendale	Umpqua									.30	.12		.25	.15	.85	.40	.12	T.								.08	.10					2.37
Glenora	Coast				.20	2.02	.75	1.00	1.03	.55	1.16	1.20	.80	2.00	2.60	.20	.58	.34	1.00	1.40	1.60	.40		.03		1.34				.27	.15	20.62
Golden Falls	do					1.32	.60	1.25	1.74	1.75	1.03	0.03	.42	1.30	2.10	1.20	2.12	.24			.24	.16				.50	.04					16.04
Granderonde	do																														
Granite	John Day																														
Grants Pass	Rogue							.04	.06	.42	.43	.02		.19	.01	1.30	.05			T.	.01	.02										2.55
Grass Valley	John Day																														
Greenhorn	Snake				.04	.26	.02	.84	.80	.55	.26	.18	.01	.48	.35	1.10	.16	.05	.09	.02						.04	.22				T.	5.47
Gumboot	do				T.	.14		.10	.10	.09	.20			.42	.02	.28	.10		.01	.03							.08					1.57
Gurdane	Columbia																														
Happy Home	Umpqua					.70	1.20	.60	.94	1.20	.20	.15	.75	1.70	.90	1.25	.90	.10			.20				.24	.20						11.23
Hay Creek	Deschutes					.04				.08	.07			.06	.81											T.						1.06
Hazeldell	Willamette				.31	.69	.20	.71	.90	.40	.40		.35	.28	.60	.69	.72	.05		.21						.20						6.71
Headworks	do			.08	.51	1.03	.59	.61	.83	.13			.60	.57	.88	.26	.67	.21	.07	.03	.56	.19				.54	.33				.36	9.05
Heppner	Columbia					.11	.14	.02	.07	.24	.06	.07	T.	T.	.08	.10	.03									.01				T.		0.93
Hermiston	Umatilla					.07	.03						T.	.15		T.															0.25
Hermoso Rio	Deschutes					.05		.35	.25	.24	.10		.10	.40	.39	.63											.16					2.67
Hilgard	Grande Ronde			T.	.10	.20	.20	.30		.20		.20	.30		T.	.40	.30	.20	.20					T.	.20							2.80
Hood River	Columbia																															‡2.25
Hoover	Willamette			T.	.05	1.60	.22	1.02	1.05	.55	.25	.05	.07	1.50	1.47	1.44	1.14	.57	.25	.16	.08	.22				.72				.03	.27	12.71
Howardville	Grande Ronde				.31	.46		.55	.30	.85	.30			.75	.31	.10	.12	.12	.11	.03						.10	.17				.03	4.61
Huntington	Snake								.02	.01					.01	.02	.02															0.08
Ibex Mine	John Day				.07	.43	.03	.43	.21	.40	.23	.10	.01	.31	.24	1.01	.32	.15	.15	.15		T.				T.	.20				.03	4.47
Ironside	Snake						.05	.10	.06	.27	.25	.02		.10		.34		.10														1.29
Jacksonville	Rogue						T.	.13	.05	.30	.37			.09	.05	.78	.03				T.						.05					1.85
Joseph	Grande Ronde									.53	.38		.20	.10	.20	.30	.10		.05													1.86
Klamath Agency	Klamath									*	1.50			.20		1.50																3.20
Klamath Falls	do							T.	T.	.12	.35			T.	T.	.40																0.87
La Grande	Grande Ronde			T.	.15	.41	.01	.39	.29	.22	.16	.01			.37	.40	.15	.11	.03	.06	.09	.11	.04									3.00
Lilyglen	Rogue					.11	.28	.40	.29	.54	.76				.21	.10	.49					.34				.03						3.55
Long Creek	John Day				.06	.20	.15	.19	.08	.10	.14	.02	T.	.01		.60	.40	.02									T.			T.		1.97
Long Valley	Pitt						T.	.27		T.	.35	.47			.06	.36	.03															1.54
McKenzie Bridge	Willamette				.02	1.11	.36	1.06	1.25	.64	.59	.09	.07	.89	1.72	1.82	1.45	.90	.05	.03	.11	.43	.01			.47	.11	.01				13.19
McMinnville	do					.17	.26	.24	.21	.33	.07	.10	.10	.86	.41	.01	.11	.24	.03	.07	.14	.05				.30				.02	.05	3.77
Marshfield	Coast					.36	.21	.41	.86	.97	.37	.06	.20	.75	.34	.92	1.03	.02			.20	.12				.16			.06	.07		7.11
Maury	Deschutes					.10				.11	.21				.21	.13	.17									.14						1.07
Meacham	Umatilla					.10	.10		.10	.15	2.10	1.10	.56	.30	.45		.90	.20														6.06
Medford	Rogue						.02	.10	T.	.10	.50	.01		.01	.01	.85	.03	T.		T.	.02	.02										1.67
Merrill	Int. drainage																														
Metolius	Deschutes									.01						.62										.10						0.73
Mikkalo	John Day					.06	.12			.20																						
Miller Prairie	do								.50		.65			.20	.50	.10																1.95
Miramonte Farm	Willamette				.03	.17	.18	.62	.25	.28	.06	.01	.25	.71	.24	.05	.05	.14		.02	.04	.03				.12	.02				.05	3.32
Monroe	do					.16	.09	.20	.30	.40			1.04	.90	.40	1.40					.01					.70						5.60
Mountain Home	Columbia			.08		.68	.45	.52	.52	.55	.37	.20	.80	.82	.81	.09	.22	.78	1.54	.98	.31	.16	T.			.53	T.			.04	.01	10.46
Mount Angel	Willamette					.22	.24	.34	.45	.28	.10		.26	.32	.42	.09	.10	.03		.01	.03	.02				.22	.01			.20		3.24
Mount Hood	Columbia					.23	.71	.25	.58	.21	.38	T.	.77	.13		T.	.45	.38			.12					.13				.03		4.37
Mountain Ranch	Rogue						.10	T.	T.		.80		T.	.40	1.40	1.00	.40				.50											4.60
Musick	Umpqua					1.95	1.08	1.90	2.55	2.09	2.55	.79	.39	.47	.30	.25	1.40	1.20			.20	.10				1.00	.20					18.42
Newport	Coast					.40	.18	.56	.32	.06	.19	.07	.34	.66	1.09	.19	.63	.01	.02	.43	.15	.02				.37	.04			.33	.84	6.60
Ochoco	Deschutes					.21			.10	.21			T.	.51	.05	.84	.20									.01						2.13
Ochoco Creek	do					.05			T.	.32	.07		.21			.09	.07				.02				.09							1.52
Owyhee	Owyhee					.04	.06	.09		.04	.22		T.	T.		.42																0.87
Paisley	Int. drainage					T.			T.		T.			.14																		0.14
Paulina	Deschutes																														
Pendleton	Umatilla																														
Persist	Rogue						.25	.30	1.12	.25	1.15			.40	.55	.41																4.43
Pilot Rock	Umatilla					T.			.09	.15	.48	.17		.07	.05	.13	.08		.06		.03								.07		1.38
Pompeii	Columbia			.55	1.30	1.34	.30	2.00	.98	.30	.25	.60	.70	.70	1.90	.25	1.75	.70	1.50	1.40	.30	.45				.90						18.17
Portland	Willamette			T.	.02	.21	.27	.14	.21	.10	.16	.02	.58	.49	.08	.08	.08	.07	T.	0	.03	T.				.06				.02	.02	2.64
Port Orford	Coast					.40	.87	.99	.45	1.04	.15		.86	.58	1.13	1.28	.31				.14					.31						8.51
Post	Deschutes					.19		T.	.08	.15	.12					.49	.06									.04						1.13
Power House	Walla Walla																														
Prairie City	John Day					.24	.01	.19	.20	.02	.08	T.		.07	*	*	*	.81	T.			T.					.08					1.70
Prineville	Deschutes								.01	.01							.59								T.	T.						0.61
Prospect	Rogue					.45	.30	.85	1.30	.70	.60	.30		.40	1.50	1.73	.75	.10														8.98
Rager Creek	Deschutes					.19		.09	.03	.12	.03			.05		.71	.40															1.62
Ramsey	Columbia					.01		.03	.07	.17	.27		.19	.10	.07					T.												0.91

TABLE 2.—*Daily precipitation for November, 1911. District No. 12*—Continued.

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Oregon—Continued.																															
Range	John Day					.20	.40	.20	.20	.03		.12			.70	.80	.04	.04														2.73
Ray Creek	Columbia					.07		.05	T.	.07	.28		.04	.10	T.	.10	.10	T.								T.				T.		0.81
Redmond	Deschutes																														
Reston	Umpqua					.16	.12	.60	.92	.85	.57	.03	.37	.68	.76	.53	.75	.02			.17	.08				.20	.01					6.82
Richland	Snake							.33	T.	T.			.06			.60				T.											0.99
Riverdale	Deschutes																														
Riverside	Malheur					T.		T.		.20	.25	.10	.05	T.		.20	.10														0.90
Rock Creek	Willamette				T.	.58	.11	.16	.99	1.09		.64	.78	1.52	1.51	1.23	.98	.15				.34										10.08
Roseburg	Umpqua					.22	.04	.03	.17	.56	.44		.36	.20	.41	.37	.26	T.			.05	.03				.03		.01				3.18
Rosland	Deschutes					.07	.05	.23	.27	.45	.50	.27		.14	.14	.60	.63	T.			T.					.11						3.46
Salem	Willamette					.11	.02	.12	.17	.33	.09		.44	.22	.10	.06	.08	.08	T.		T.	.02		T.		.06					.07	1.97
Seneca	SE. drainage							.20			.40						.66			.02											.06	1.34
Siskiyou	Rogue						.03	.21	.12	.09	.87	.06		.39	.10	1.48	.12	.08				.04											3.59
Sisters	Deschutes				.04		.24	.26	.20	T.	T.	.47		.29		.10	.70	.14				.15				.17							2.82
Sparta	Snake				T.	.20	.04	.10	.20	.20	.10	.10	T.	.80	.15	.08		T.	.10								.40	.10					2.57
Stafford	Willamette				.05	.34	.16	.63	.27	.30	.04	.01	.24	.85	.41	.06	.09	.05	.02	.01	.07					.18	.04					.08	3.90
Starkey	Grande Ronde					.18		.20	.25	.19	.23	T.			.31	.57	.06	T.	.02													2.01
Summit	Willamette					.70	.53	.44	.70	.50	.34	.01	.46	.60	1.08	.11	.50	.15	.03	.14	.16	.03				.48				.12	.31	7.45
Summit Prairie	Deschutes																														
Susanville	John Day					.25		.40	.35	.20	.16	.10			T.	1.05	.50	.10	.05							T.						3.16
Tamarack	do						T.	.30	.03	.02	.50	.03	.09	.09	.11	.70	.14										T.					2.01
Telocaset	Snake			.05	.01	.07	.03	.01	.12		.10			.20	.12	.30	.04	.10								.05						1.20
The Dalles	Columbia						.07	.07		.12	.43	.15		.29			.06									T.						1.19
Tinroof Cabin	Umatilla				T.	.25		.37	.29	.20	.34	.14		.23	.03	.47	.22															2.54
Toledo	Coast					.60	.40	1.00	.60	.53	.30	.10	.40	1.10	1.40	.60	.80	.10	.35	.20	.20					.80				.65		10.10
Trail	Rogue					.11		.41	.23	.56	.50	.07		.29	.33	1.35	.27	.03									T.					4.15
Trask	Coast				.05	1.60	1.01	2.00	1.94	.15		.45	2.23	1.98	2.18	.22	1.50	1.04	2.20	2.14	.47			1.06						.15		22.37
Umatilla	Columbia				.10		.11			T.	T.		.20	T.			T.									T.				T.		0.41
Union	Grande Ronde			.01	.03	.21		.14	.15	.20	.03	.02	T.		.22	.49	.05	.01		.01						.05	.06					1.68
Unity	Snake																														
Vale	Malheur				.04		.04	.33		.01	.22					.42											.04					0.80
Valley Falls	SE. drainage					T.		.01	T.			.86	.16																			1.03
Wallace Orchard	Willamette																														
Walloupa	Grande Ronde				.12	.31		.39	.48	.44	.26		.11	.51	.72		.03	.03	.02	.02						.21	.13					3.78
Wallowa	do			T.	.06	.07		.05	.23	.25	.24			.15	.22	.16	T.	.06	.05	.03		.02				.11	.06				.01	1.77
Wamic	Deschutes							.40	T.	.12	T.			.06	.28											T.					T.	0.86
Warmspring	do						T.			T.	.05					.57										.08						0.70
Wasco	Columbia					.08		.10	.20	.20	.08	.05					.05					T.	T.									0.76
Welches	do			.20	.70	1.73	.37	2.03	2.00	.20	.35	.05	.90	.65	1.43	.20	.93	.69	.32	.29						.90				.26		14.52
Westfall	Malheur																														
Weston	Walla Walla		T.			T.	.25	.05	.07	.15	.40	.17			.20	.10	.05		.15	.05						.15						1.79
Williams	Rogue							.05		.47	.46			.26	.05	1.32						.10										2.71
Yonna	Int. drainage																														

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for November, 1911. District No. 12, Columbia Valley.*

Date.	Montana.				Afton, Wyo.		Idaho.																			
	Kalispell.		Missoula.				Boise.		Bonners Ferry.		Hotspring.		Lewiston.		Mackay.		Meadows.		Pocatello.		Salmon.		Shoshone.		Vernon.		Wallace.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	42	20	46	20	52	31	54	34	51	18	62	25	54	26	42	17	.....	.....	50	20	50	18	51	25	.....	.....	44	23
2....	37	16	42	14	50	11	53	29	46	17	55	22	50	25	50	19	.....	.....	49	16	46	15	50	19	.....	.....	42	22
3....	31	20	34	16	51	17	57	31	47	19	56	27	50	29	44	23	.....	.....	53	25	44	19	52	21	.....	.....	42	26
4....	36	30	38	27	48	30	51	36	56	24	60	38	46	31	51	26	.....	.....	45	32	48	23	49	30	.....	.....	39	29
5....	36	26	41	30	40	26	41	29	39	27	52	28	57	35	52	23	.....	.....	42	30	40	25	42	21	.....	.....	42	32
6....	43	34	45	32	41	25	46	29	47	25	50	30	58	41	41	21	.....	.....	43	29	43	24	42	29	.....	.....	42	32
7....	43	32	51	30	37	8	49	36	47	30	55	30	58	43	39	18	.....	.....	38	31	51	25	45	25	.....	.....	44	35
8....	39	7	47	35	41	28	52	40	57	30	57	37	53	39	41	25	.....	.....	41	33	45	22	49	32	.....	.....	38	30
9....	10	3	14	8	42	23	42	32	47	10	56	34	40	33	48	20	.....	.....	37	28	38	18	41	29	.....	.....	33	18
10....	4	− 1	13	6	41	19	40	24	20	9	46	32	35	21	28	15	.....	.....	42	18	30	15	34	22	.....	.....	16	11
11....	9	− 8	16	0	25	1	25	16	16	−10	36	19	27	19	20	6	.....	.....	18	13	24	4	30	12	.....	.....	16	7
12....	15	0	22	− 2	23	− 8	44	21	16	0	35	16	41	23	32	6	.....	.....	32	9	18	− 1	26	4	.....	.....	30	7
13....	33	15	41	18	38	17	47	36	22	8	50	33	51	35	32	6	.....	.....	39	28	34	22	36	23	.....	.....	38	30
14....	44	24	48	34	37	17	49	38	47	17	56	39	58	39	36	14	.....	.....	44	33	49	23	41	31	.....	.....	45	33
15....	37	21	43	30	47	33	50	39	47	20	60	44	45	36	39	16	.....	.....	48	33	40	21	43	34	.....	.....	44	26
16....	40	22	43	26	46	26	44	36	41	11	52	34	50	33	37	23	.....	.....	37	29	43	22	39	29	.....	.....	38	26
17....	45	30	46	32	41	25	50	38	46	23	57	36	56	43	44	22	.....	.....	42	31	45	22	44	29	.....	.....	38	33
18....	46	36	50	39	36	30	49	34	46	23	53	31	59	43	45	26	.....	.....	46	36	44	24	44	29	.....	.....	45	35
19....	44	33	46	38	45	29	56	38	48	30	60	50	54	44	48	19	.....	.....	49	38	45	23	52	32	.....	.....	42	36
20....	35	28	54	29	51	27	59	34	46	28	58	35	55	35	39	16	.....	.....	53	34	43	27	49	30	.....	.....	48	32
21....	42	29	46	32	44	16	45	31	45	27	57	38	51	31	51	21	.....	.....	47	30	42	25	41	25	.....	.....	45	34
22....	41	27	46	26	39	9	42	25	39	19	46	22	48	26	34	20	.....	.....	37	23	41	26	37	18	.....	.....	36	26
23....	31	21	35	20	28	− 1	46	27	40	28	48	24	48	29	32	12	.....	.....	39	22	40	17	40	20	.....	.....	38	25
24....	38	20	42	19	28	− 1	46	27	39	15	50	20	50	26	37	10	.....	.....	42	20	38	9	41	18	.....	.....	40	26
25....	32	22	41	19	27	1	39	26	39	16	48	21	50	34	35	13	.....	.....	44	23	32	4	43	22	.....	.....	44	26
26....	33	14	40	28	40	15	44	28	35	21	52	27	44	28	32	9	.....	.....	42	26	34	10	40	25	.....	.....	37	26
27....	22	5	30	13	52	−10	37	23	36	15	42	19	42	23	36	− 1	.....	.....	26	10	36	11	34	13	.....	.....	28	14
28....	18	1	26	9	13	−26	39	21	28	5	39	14	41	26	23	− 1	.....	.....	28	6	32	3	31	10	.....	.....	28	10
29....	23	9	28	9	17	−19	36	19	29	9	43	17	43	31	27	− 2	.....	.....	32	5	34	4	31	12	.....	.....	30	19
30....	31	23	43	9	32	− 9	40	23	39	21	38	12	50	38	34	5	.....	.....	42	14	32	4	41	15	.....	.....	43	30
Mns..	32.7	18.6	38.6	21.5	38.4	13.0	45.7	30.0	40.0	17.8	51.0	28.5	48.8	32.2	38.3	14.9	.....	.....	40.9	24.2	39.4	16.8	41.3	22.8	.....	.....	38.1	25.5

Date.	Washington.																									
	Aberdeen.		Blaine.		Colville.		Kosmos.		Lakeside.		North Head.		North Yakima.		Odessa.		Port Crescent.		Seattle.		Sixprong.		Spokane.		Tacoma.		Tatoosh Island.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	58	42	52	29	53	16	64	34	53	30	58	46	60	34	53	20	51	34	53	42	57	33	52	24	49	41	50	46
2....	58	43	52	34	52	19	64	31	55	31	52	43	55	25	54	19	48	34	47	41	55	27	54	23	48	41	50	45
3....	55	45	53	46	56	24	54	35	57	37	53	50	62	30	57	25	54	45	52	41	57	32	56	34	53	40	54	49
4....	55	45	51	37	52	25	50	44	61	37	52	48	61	34	54	19	51	39	52	45	58	42	50	30	54	45	53	46
5....	56	46	51	43	36	26	52	42	48	38	53	49	62	38	50	22	55	42	56	44	62	38	49	34	55	46	52	47
6....	56	41	50	41	45	26	48	40	47	35	53	47	52	28	48	24	51	40	51	44	52	42	46	33	52	44	52	43
7....	58	43	50	42	45	34	54	42	52	35	55	48	62	30	53	28	53	42	57	47	58	41	54	38	55	48	50	46
8....	50	34	50	28	45	30	51	33	49	26	49	36	53	40	56	22	42	31	47	34	53	35	42	28	45	33	46	35
9....	38	28	29	21	32	11	40	29	28	19	44	31	41	22	46	11	31	25	39	31	42	28	28	15	38	29	35	27
10....	34	25	26	15	20	7	35	23	22	14	35	29	35	22	25	10	26	19	33	24	35	29	16	12	30	24	29	26
11....	29	18	24	5	17	5	29	7	16	6	42	27	25	5	12	− 3	30	13	31	22	25	7	18	8	31	19	41	25
12....	45	24	39	20	28	9	35	25	18	11	50	42	26	17	22	8	44	30	43	30	26	19	32	8	44	28	48	36
13....	50	40	34	31	29	8	40	32	29	15	51	47	42	24	35	12	45	35	51	43	29	18	40	26	51	42	47	41
14....	52	36	50	32	47	24	54	34	42	18	52	46	55	30	43	15	53	33	51	43	54	25	46	37	52	44	51	44
15....	44	35	46	33	40	12	42	31	40	26	48	41	47	28	45	13	43	30	47	38	56	33	39	25	46	36	46	43
16....	50	36	46	37	37	12	40	36	34	21	50	47	48	22	41	21	51	33	53	42	53	35	43	28	51	41	50	43
17....	52	48	51	43	47	28	47	39	53	25	51	48	60	31	44	22	56	48	53	49	56	42	46	41	51	48	50	49
18....	53	49	52	46	47	32	50	42	54	37	51	50	67	35	50	25	55	45	53	48	57	47	50	42	52	50	51	46
19....	54	49	46	40	48	34	54	46	49	38	51	49	63	39	54	28	45	40	55	46	58	49	53	46	55	51	51	44
20....	52	44	54	42	53	31	52	35	45	36	52	44	57	28	53	37	50	39	54	46	59	31	54	30	55	43	51	46
21....	51	32	50	40	43	28	47	35	55	35	48	41	52	30	56	35	50	32	50	40	53	37	47	35	51	37	49	43
22....	43	30	46	30	42	23	52	28	48	28	50	39	48	18	43	19	43	29	47	35	48	21	41	28	44	30	47	42
23....	41	33	50	34	45	19	48	30	46	31	50	44	50	27	41	22	46	33	51	40	48	28	42	28	51	36	48	42
24....	43	36	49	41	35	29	53	31	41	29	51	47	45	24	45	20	48	34	54	42	50	29	42	26	56	39	51	48
25....	53	38	52	42	35	27	51	33	39	29	52	44	47	23	46	23	51	31	52	46	56	28	45	29	54	44	50	46
26....	48	36	47	31	35	18	49	31	39	27	50	40	51	25	42	19	43	32	46	38	53	27	37	26	46	37	47	42
27....	49	37	44	28	32	9	50	40	36	23	51	46	40	16	34	19	46	32	52	36	46	29	34	21	50	32	48	42
28....	46	33	40	26	28	7	52	41	31	18	48	41	37	12	36	15	46	34	50	41	47	21	34	20	48	34	50	43
29....	48	39	47	37	30	7	45	38	35	24	49	43	40	24	38	17	45	34	46	41	48	20	34	24	47	39	50	43
30....	56	43	48	43	38	24	56	40	37	27	53	46	42	21	36	14	48	41	53	44	47	25	40	32	51	43	51	47
Mns..	49.2	37.6	46.0	33.9	39.7	20.1	48.6	34.2	42.0	26.9	50.0	43.3	49.5	26.1	43.7	19.5	46.7	34.3	49.3	40.1	39.9	30.0	42.1	27.7	48.8	38.8	48.3	42.2

TABLE 3.—*Maximum and minimum temperatures for November, 1911. District No. 12*—Continued.

Date.	Walla Walla, Wash.		Oregon.																					
			Ashland.		Baker.		Eugene.		Gold Beach.		Hermiston.		Marshfield.		Portland.		Prineville.		Roseburg.		The Dalles.		Vale.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	52	36	59	35	52	26	58	45	.....	.....	58	21	65	38	63	45	57	35	56	38	58	33	62	20
2	56	36	58	35	52	20	57	32	.....	.....	57	17	65	33	58	42	54	19	56	38	56	28	55	16
3	63	40	65	47	55	28	63	35	.....	.....	67	27	62	35	53	44	50	30	59	38	66	32	59	21
4	56	44	57	43	44	31	58	40	.....	.....	63	37	58	37	55	48	50	28	57	44	59	46	52	27
5	60	42	48	36	40	28	58	42	.....	.....	64	34	56	44	56	47	57	29	60	44	63	45	56	38
6	55	40	58	45	44	25	57	45	.....	.....	67	37	59	51	53	40	60	23	60	51	56	40	48	22
7	59	48	55	46	42	32	58	51	.....	.....	65	42	56	51	62	51	60	28	58	48	62	41	46	30
8	50	35	57	43	42	29	55	45	.....	.....	60	43	54	47	53	38	59	20	54	42	55	46	51	30
9	39	29	50	33	32	25	47	37	.....	.....	55	26	48	40	41	33	53	22	42	38	42	36	45	29
10	29	17	35	30	29	13	39	29	.....	.....	40	21	43	34	38	28	46	20	38	32	34	28	41	29
11	25	10	41	26	20	−2	39	23	.....	.....	30	16	47	27	35	24	35	8	43	25	30	16	34	11
12	47	17	43	31	28	18	45	24	.....	.....	31	21	50	37	47	35	49	19	50	37	32	24	34	19
13	52	23	50	38	41	24	51	42	.....	.....	47	26	52	46	53	46	51	22	55	42	54	31	39	27
14	58	47	54	43	48	36	55	48	.....	.....	64	28	56	50	58	44	50	26	59	48	59	42	40	31
15	48	39	50	41	35	29	53	44	.....	.....	54	32	54	46	48	37	54	29	53	42	52	35	45	33
16	53	39	46	38	38	20	49	41	.....	.....	52	38	53	38	54	45	50	31	52	43	51	40	53	33
17	55	50	65	38	46	28	53	42	.....	.....	62	42	55	49	57	49	50	31	54	45	60	49	53	37
18	59	50	46	35	43	32	55	43	.....	.....	65	41	61	41	56	51	58	33	54	39	63	50	50	33
19	60	49	40	32	47	34	64	46	.....	.....	62	42	56	41	60	52	58	31	51	37	58	49	56	32
20	60	46	42	31	53	32	55	35	.....	.....	61	38	54	47	53	45	64	25	50	38	57	36	52	27
21	52	38	54	34	43	26	53	39	.....	.....	59	41	54	37	53	38	63	24	49	32	50	42	54	29
22	49	32	55	28	41	21	46	38	.....	.....	50	18	61	31	49	34	50	26	48	33	48	26	51	21
23	47	30	46	28	41	25	54	30	.....	.....	52	25	60	31	49	34	53	12	50	33	47	29	47	20
24	46	28	49	29	43	21	58	32	.....	.....	52	22	60	32	52	36	50	14	49	30	47	28	42	16
25	57	35	45	31	40	25	55	41	.....	.....	53	24	56	42	55	40	49	18	55	33	58	29	40	18
26	47	30	49	31	41	26	54	40	.....	.....	58	18	61	38	41	34	60	20	52	37	54	28	50	22
27	31	22	58	30	35	16	47	34	.....	.....	58	13	62	40	46	36	62	26	49	36	42	24	46	14
28	27	17	56	39	34	18	44	25	.....	.....	38	10	53	29	45	37	54	20	52	29	39	20	36	10
29	32	21	48	33	35	17	53	36	.....	.....	39	15	58	41	49	40	50	13	51	36	40	27	35	12
30	43	31	46	29	42	26	60	36	.....	.....	46	36	53	30	55	41	53	19	50	30	45	33	41	16
Means	48.9	34.0	50.9	35.3	40.8	24.3	53.1	38.0	.....	.....	54.3	28.4	56.1	39.4	51.6	40.5	53.8	23.4	52.2	37.9	51.2	34.4	47.5	24.1

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning: the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

PAPERS ON CLIMATOLOGY IN RELATION TO AGRICULTURE, TRANSPORTATION, WATER RESOURCES, ETC.

A CARELESS STATEMENT.

Under the above heading there appeared in the Monthly Weather Review for March, 1911, page 362, certain notes by J. Warren Smith, professor of meteorology, Columbus, Ohio, in regard to the growing of peaches in Michigan and northern Kansas, extracted from a book on "Climate and Meteorology of Australia" by Commonwealth Meteorologist H. A. Hunt, Melbourne, Australia.

The correspondence resulting from the publication of these notes is herewith reproduced in order that no reflection shall be cast upon the scientific reputation of Mr. Hunt, the author of the last-mentioned publication.

Letter from Mr. Hunt to the Chief, United States Weather Bureau.

MELBOURNE, *September 28, 1911.*

DEAR COLLEAGUE: In your Monthly Weather Review, March number, just to hand, appears a libelous note, page 362, by J. Warren Smith, section director, headed "A Careless Statement," which if not replied to is likely to reflect upon my scientific reputation.

As an officer in charge of a scientific department it should have been clear to him that no statement in print over my name would appear without emanating from some authentic source of information, and also that no scientist would publish alleged facts from the unsupported source of newspaper columns.

My source of information was the report of the Meteorological Congress held in Chicago, 1893, printed as one of your bulletins. On page 438 you will find the statement of facts complained of. As I have never seen these disputed by any authority in the United States I accepted them in good faith. In fact, if the statement is incorrect, what credence can be placed in any of the published reports of papers read at that congress?

In fairness to me I shall esteem it a favor if you will give space in a future issue of the Monthly Weather Review for this refutation.

Will you kindly set me right in regard to Curtis's statement, so that in revised issues of the bulletin "Climate and Meteorology of Australia" the true facts may be given. In the meantime I shall continue to publish my former statement as being based on an authentic official report.

Finally, Mr. Smith, while accusing me of quoting a statement without taking the trouble of verifying it, is self-committed on the face of it of a similar charge, for had he read the three preceding lines of the quotation he would have noticed the following reference: "Curtis, in a paper read before the Meteorological Congress in 1893, sets forth," etc.

I am conscious that no apology is required for bringing the matter under your notice, and at the same time desire to express the assurance that your kind acquiescence in my request will be highly esteemed.

I am, dear colleague, yours faithfully,

(Signed) H. A. HUNT,
Commonwealth Meteorologist.

Prof. WILLIS L. MOORE, LL. D., Sc.D.,
Chief United States Weather Bureau, Washington, D. C.

The above letter was forwarded to Prof. Smith, and his statement appears below:

In the Monthly Weather Review for March, 1911, page 362, the writer, under the head of "A Careless Statement," referred to a paragraph in Climate and Meteorology of Australia, by H. A. Hunt.

The paragraph had reference to the effect of deforestation upon the peach crop in Michigan and northern Kansas, and in connection therewith letters were quoted from officials in both States showing that the facts were not as stated in Mr. Hunt's book.

Mr. Hunt, the Commonwealth meteorologist of Australia, states that his authority was the report of the Meteorological Congress held in Chicago in 1893, page 438. He requests that the implication that any statement would be made in print over his name without emanating from some authentic source of information be refuted in the pages of the Review.

This I hasten to do, and herewith present an apology for such implication. My criticism should have gone beyond Mr. Hunt to the authority that he quoted. Mr. Curtis was writing of cold winds that are injurious to vegetation, and said:

"The low temperatures alone would not prove disastrous, but it is the wind which renders the cold penetrating and destructive. These cold winds are the principal enemy of the tender peach and determine the limit of its successful cultivation. A remarkable example of their effect is to be found in the climatic history of Michigan, where a half century ago peach trees flourished and were rarely injured by the cold; but after the lumberman began his work of deforestation, Dakota blizzards made greater and greater inroads into the State, the tender peach trees were killed along their path, and now the peach crop has nearly disappeared. From the same cause the attempt to grow peaches in northern Kansas has been largely abandoned. * * *

Mr. Hunt's paragraph to which my article referred reads:

"In Michigan, United States of America, where half a century ago peach trees flourished and were rarely injured by the cold, the crops have now nearly disappeared, owing to the removal by timbermen of the shelter afforded by the forests. In northern Kansas, too, from the same cause, the growing of peaches has been largely abandoned."

The present writer must confess that he did not notice the reference to Mr. Curtis's paper in the lines immediately preceding the paragraph quoted from Mr. Hunt's book, and he regrets the intimation that Mr. Hunt's authority was some unsupported magazine or newspaper article.

At the same time it seems to the writer that the statement of Mr. Curtis was incorrectly used to support an argument against deforestation. As is well known by people at all familiar with conditions in the Missouri Valley, and as was so well stated in the letter from the secretary of the Kansas State Horticultural Society, there were never any forests in northern Kansas to be cut off.

As to the reliability of Mr. Curtis's statement, I can only refer again to the letters published with the article in the March Review. The secretary of the Kansas State Horticultural Society makes plain that there are a large number of peach trees successfully grown in northern Kansas.

The head of the department of horticulture of the Michigan Agricultural College is very emphatic also in saying that while there are not so many peaches grown in that State as formerly, the cause is not from deforestation, but because of soil exhaustion and the spread of serious diseases, with the lack of attention to these diseases. He says that in many cases where the proper attention is given to all details of peach production the reward is just as fine a crop as ever was obtained.

The letters from Messrs. Eustace and Wellhouse are reproduced herewith.

(Signed) J. WARREN SMITH,
Professor of Meteorology.

Letter from H. J. Eustace, Division of Horticulture, Michigan Agricultural College Experiment Station, East Lansing, Mich., February 21, 1911.

It is true that peaches are not so extensively raised in the southern part of Michigan as they were some 25 years ago, but the reason is not the one that is given in the quotation in your letter by any means. The real reason is soil exhaustion, the coming of serious diseases like the peach yellows and little peach, and the spread of the San Jose scale.

The old peach orchardists who could produce a crop in a very easy way are not willing to give them the care and attention now necessary to produce a crop. However, there are many cases where the proper attention to all the details of the peach production are given, and the reward is a fine crop, just as fine as was ever obtained.

Letter from Walter Wellhouse, secretary Kansas State Horticultural Society, Topeka, Kans., February 20, 1911.

Your letter to Mr. Coburn, in regard to peach growing in northern Kansas, was handed this department for reply.

In order to give you an idea of the extent to which peaches are grown in northern Kansas, we present a statement of the number of bearing peach trees now growing in some of the northern counties, as follows: Atchison, 43,327; Brown, 57,876; Clay, 48,124; Cloud, 63,027; Doniphan, 58,541; Jackson, 56,151; Jewell, 221,269; Marshall, 81,487; Nemaha, 71,124; Pottawatomie, 40,158; Washington, 93,128; total, 884,222 peach trees.

Forests have not been extensively cut in northern Kansas in the recollection of its oldest inhabitants, because no such forests existed. There are many more trees now growing in this part of our State than were there 50 years ago, the result of plantings of the inhabitants. Mr. Hunt is certainly mistaken in his statements as regards peach growing in northern Kansas.

WEATHER, FORECASTS AND WARNINGS, NOVEMBER, 1911.

By EDWARD H. BOWIE, District Forecaster.

The month as a whole was marked by decided weather changes throughout the country, storms being frequent and attended by well-distributed precipitation and pronounced changes in temperature. Over the North Atlantic steamer routes disturbances were severe and caused delays to shipping.

Over the Icelandic area pressure was below normal from the 1st to 9th and from the 28th to 30th, while during the remainder of the month it was near or above normal. Pressure was relatively low on the 2d, 4th, 8th, 11th, 17th, 22d, 25th–26th, 28th–29th, and at the end of the month, and relatively high on the 9th–10th, 14th–15th, 20th, 23d, and 27th. The lowest pressure occurred on the 4th, 28.30 inches. Fluctuations during the greater part of the month were not marked. Over the British Isles, however, gales were reported on the 5th and 6th and again on the 10th. In Spain a severe storm occurred on the 19th, and a press dispatch states that a sirocco prevailed on the coast of the Adriatic Sea from the 22d to 24th, which caused much damage to shipping.

Over the Azores pressure was high from the 1st to 10th and near or below normal from the 10th to 25th. Pressure was relatively low on the 7th–8th, 10th–11th, 13th–14th, 19th–20th, 24th, and 28th–29th, and relatively high on the 5th–6th, 8th–9th, 11th–12th, 15th–17th, 22d–23d, 27th, and 30th. The lowest pressure, 29.38 inches, occurred during the 13th–14th.

Barometric oscillations in Siberia were of marked frequency and severity. Pressure was relatively low about the 5th, 9th, 15th, 20th, 27th, and 29th–30th, and relatively high on the 3d, 12th, 17th–18th, and 24th.

Alaskan observations showed pressure generally above normal from the 4th to 12th, and generally below thereafter. Pressure was relatively low about the 2d, 6th, 10th–11th, 14th, 17th, 23d–24th, and 28th–29th, and relatively high about the 4th, 8th, 12th, 20th, and 26th. On the 11th Nome experienced the worst storm since that of 1900, which caused a great deal of damage to property.

At Honolulu pressure was below normal on the 3d and 25th and above the seasonal average during the remainder of the month. Pressure fluctuations were of very slight intensity.

In the United States the month opened with temperatures generally below the normal throughout the country, with a storm center off Nantucket which caused rains in New England, and a high pressure area of great magnitude—30.98 inches at Miles City—over the Plains States, accompanied by temperatures from 10 to 20° below the seasonal average. The high-pressure area advanced southeastward to the middle Mississippi Valley by the evening of the 2d, and thence eastward to the middle Atlantic coast by the morning of the 4th, with decreased intensity. This high pressure area was of remarkable development and wide extent, especially when the season is considered, there being on the morning of the 2d but two stations in the whole United States that reported pressure below 30 inches. Frost occurred in the middle tier of States from the Rocky Mountains to the Atlantic coast, and freezing temperatures were reported in northern portions of the Gulf States and on the Atlantic coast as far south as the Carolinas, warnings of which were issued well in advance. During the next several days fair weather prevailed, accompanied by a general change to warmer weather in all States east of the Rockies.

The following weekly forecast was issued November 5:

The severest storm of recent years over western Europe and the British Isles was central Sunday morning over northern Scotland, where the barometric pressure was 28.14 inches. It is causing gales and rains over waters adjacent to western Europe and will undoubtedly result in a considerable loss of life and damage to shipping in that region. This storm will move eastward over northern Europe the first part of the coming week.

In the United States the coming week will be one of pronounced weather changes. Disturbances that now cover the Rocky Mountains and British Columbia will advance slowly eastward and be preceded by unsettled weather, local rains, and mild temperature the first half of the week in the middle West and the Southern and Eastern States; rains are also probable Monday and Tuesday in the north Pacific States. Following this disturbance the pressure will rise rapidly and decidedly colder weather will overspread the Northwestern States Tuesday and Wednesday and advance eastward over the middle West Wednesday and Thursday, and the Eastern States the latter part of the week. It is probable that this change to colder weather will be attended by snows in the Northern States.

The first storm of the month advanced from the southern plateau on the 4th to the nothern Plains States by the 5th, and was central over Wisconsin on the morning of the 6th with increased intensity. By the night of the 6th the disturbance had advanced to the northern portion of the Michigan Peninsula, with lowest reported barometric pressure 29.30 inches. Brisk to high winds occurred over the Upper Lakes and high winds over the Lower Lakes, timely warnings of which were desseminated. Southwest warnings were again issued on the 6th for the Lower Lakes and winds of verifying velocities occurred at most of the stations where warnings were displayed. On the 6th warnings of high winds were ordered for the Atlantic coast from Norfolk to Eastport and were fully verified. The storm moved slowly eastward to the mouth of the St. Lawrence River by the morning of the 8th. The advance of this low across the country was preceded by warmer weather and attended by rains from the Missouri Valley eastward and in the east Gulf and south Atlantic States. A high-pressure area of slight intensity appeared on the North Pacific coast on the morning of the 6th and moved to western Kansas by the 7th, to the Ohio Valley by the 8th, and to northern New England by the morning of the 9th. This high area was attended by a moderate change to colder weather. Southeast storm warnings were ordered for the North Pacific coast during the afternoon of the 6th and, within 24 hours, winds of storm force occurred in connection with the low-pressure area that was central on the morning of the 7th over British Columbia. By the morning of the 8th, low pressure prevailed from the middle slope of the Rocky Mountains to the northern Plateau, and the southern edge of an area of high pressure showed in the Province of Alberta. Although the highest pressure reported in the latter region was 30.10 inches, minimum temperatures of zero were reported from several stations. The same general

pressure distribution continued in the West for four consecutive 12-hour periods, rains and snows being reported in the northern and middle plateau regions and on the North Pacific coast. On the evening of the 7th there were indications of a slight disturbance south of the lower Texas coast and by the morning of the 8th it had advanced to a position south of the Louisiana coast, with slightly increased intensity, good rains being reported from the Gulf States. Advisory warnings of brisk to high winds were issued for points on the Alabama, Mississippi, and extreme western Florida coasts. The storm passed inland over the mouth of the Mississippi River and was central on the morning of the 9th near Cape Hatteras, having caused general rains in the south Atlantic and east and central Gulf States. From Cape Hatteras the disturbance passed northward, attended by rains in the States adjacent to the coast. During the night of the 9th a low-pressure area developed over the Dakotas and by the morning of the 10th was central over the western portion of the Province of Ontario, whence it moved rapidly northeastward. This storm caused snows and rains in the northern Plains States, the upper Mississippi Valley, and the Lake region. It is reported in connection with this storm that snow fell in the Canadian wheat belt to the depth of 1 foot, causing the loss of a large amount of wheat. In the Middle Atlantic States a number of cities experienced such dense fogs on the morning of the 11th that traffic was temporarily impeded. Coincident with the development of this low, temperatures fell from 20 to 32° over the northern plateau and the northern slope of the Rocky Mountains, warnings of which were issued on the 8th. On the morning of the 10th, falls of from 20 to 36° were reported over the Dakotas, Nebraska, and western Minnesota. In the States east of the Rocky Mountains a general rise in temperature was in progress from the 8th to the 11th. On the morning of the 10th a low-pressure area was central over the northern and middle plateau regions with an axis northwest-southeast, attended by precipitation in that region and on the Pacific coast. Gales were reported in the latter district, warnings of which were issued the previous day. By the evening of the 10th the storm's axis extended east-west from Kansas to Utah, there being three separate centers. On the morning of the 11th the axis was northeast-southwest, reaching from Wisconsin through Iowa and Kansas to northeastern New Mexico. The high pressure over Alberta in the meantime had remained practically stationary, but the temperature had fallen to below zero at a number of stations, Calgary in Alberta reporting a reading of 22° below zero. The low-pressure area before mentioned moved rapidly eastward with increasing intensity, preceded by rising temperature and accompanied by gales of great severity on the Great Lakes and the Gulf and Atlantic coasts, warnings of which were issued well in advance of their occurrence. During the afternoon and night of the 11th a number of local storms occurred in Indiana, Iowa, Wisconsin, and Michigan, causing damage to farm property, houses, buildings, and telephone, telegraph, and power services, and the loss of a number of lives. Vessel captains on the Lakes speak of this storm as the "worst blow" in years. The extremely few wrecks reported on the Lakes is a testimonial to the efficacy and timeliness of the warnings of the Weather Bureau. To give some idea of the unusual severity of this storm, vessels were wrecked or driven ashore even when within harbors, where they were supposed to be safe. What would have been the fate of vessels of low power and mediocre equipment on the open Lakes is not difficult to imagine.

23100—12—10

The following weekly forecast was issued Sunday, November 12:

The coming week will be one of pronounced weather changes and low temperatures over practically the entire country. The cold wave that now covers the Middle West will advance rapidly eastward and give the lowest temperatures of the season the first two days of the week throughout the Eastern and Southern States and on these days abnormally low temperatures will continue in the interior districts east of the Rocky Mountains. An extensive disturbance that is now off the north Pacific coast will advance slowly eastward and be attended the first part of the week by stormy weather in the north Pacific States. It will cross the Rocky Mountains Tuesday, the Middle West Wednesday or Thursday, and the Eastern States the latter part of the week. This disturbance will be preceded by a general change to warmer weather, be attended by rains in southern and rains and snows in northern districts, and will be followed by a change to colder weather over the northern half of the country.

Following the passage of the disturbance before referred to, the area of high pressure over Alberta advanced to the northern plateau by the evening of the 11th and thence southeastward to the west Gulf States, whence it passed northeastward to a position off the southern New England coast on the evening of the 14th. Falls in temperature ranging from 20 to 60° occurred over the entire country, with the exception of the Pacific coast and the southern plateau; one station in the Mississippi Valley reporting a fall of 70° in 17 hours. Preceding the above-mentioned area, temperatures were unseasonably high and the sudden and extreme change to lower temperatures accompanying its passage, together with the severe winds, caused extreme suffering over the region of the Plains States, the Mississippi and Ohio Valleys, and the Lake region. Late cotton in Texas is reported to have been killed and the cotton belt as a whole had the coldest weather for the season experienced in years. A number of stations reported the lowest temperatures in connection with this cold wave that have been recorded during the early part of November in many years and the rate of fall broke previous records in a number of cities. Railroads in Colorado and neighboring States had trouble with the snow, as was also the case in Wisconsin, upper Michigan, and Minnesota. Ice formed in the harbor of Duluth, Minn., to a thickness of 6 inches, effectually interrupting the passage of ferryboats. This is the earliest closing of the harbor reported in 20 years. On the coast and in the interior of the Gulf States high winds occurred, being particularly severe in the vicinity of Mobile Bay. On the Great Lakes gales prevailed during the 11th and 12th, while on the Atlantic coast they occurred on the 12th and 13th. Warnings were issued in advance of the occurrence of these winds and timely warnings were given of the colder weather in all sections, among which the following, issued the morning of the 11th for the west Gulf States, is an example:

Cold wave Amarillo, Abilene, El Paso, Fort Worth, Oklahoma, Bentonville, and Fort Smith. Freezing temperature in northern Texas; temperature 8° to 14° Texas Panhandle; 10° to 20° Oklahoma; freezing temperature northern and western portions Arkansas; temperature 20° to 28° northwest portion.

Later in the day the following was distributed:

Cold wave Taylor and San Antonio, and freezing temperature northern portion of sugar regions of Louisiana and Texas next 24 to 36 hours.

A number of planters on receipt of this message started to cut and windrow their cane, but in spite of the large saving effected thereby great damage resulted to the cane crop.

The next low to cross the country appeared on the North Pacific coast the evening of the 12th. By the morning of the 14th it was central over the Plains States, and by the evening of that date was over Lake Superior. Two low centers appeared on the morning map of the 15th, one central near Nantucket and the other northeast of Lake Huron. By the morning of the 16th there was but one center of low pressure, central north of Nova Scotia, with lowest reported pressure 29.20 inches. The low pressure persisted in that region for several days and caused particularly severe gales from the middle Atlantic coast to the Grand Banks. Snows occurred in the Lake region and rains in the north Atlantic States in connection with this storm. On the evening of the 14th a high pressure area of slight intensity appeared in Alberta, and by the morning of the 15th was over eastern South Dakota, with temperatures below zero in the Canadian Northwest and in North Dakota, Minnesota, and eastern and central Montana. On the morning of the 16th the high was over the Michigan Peninsula, and by the following morning over eastern Pennsylvania, whence it passed eastward off the coast by the evening of that date. It was accompanied by much colder weather over the Northern and Middle States east of the Rocky Mountains. A low-pressure area appeared on the North Pacific coast on the 14th, and moved to Wyoming by the morning of the 15th, and the next morning was over Colorado. The storm, thus far in its course, caused precipitation in the North Pacific Coast States and the northern plateau. By the evening of the 16th it had advanced to eastern Kansas with increasing intensity, and on the morning of the 17th was over the upper Mississippi Valley, with lowest pressure 29.36 inches. On the previous day storm warnings were ordered for Lakes Superior, Michigan, Huron, and Erie, and were continued on the 17th for the above-mentioned lakes and extended to Lake Ontario. Warnings were also ordered from Hatteras to Eastport on the Atlantic coast. The storm was central on the evening of the 17th over the northern Michigan Peninsula, and on the morning of the 18th had advanced to the eastern portion of the Province of Ontario, with pressure reading at Stonecliffe of 29 inches. Gales occurred on the Lakes and Atlantic coast in connection with this storm as forecast, and well-distributed rains and snows were reported from the Mississippi Valley eastward. By the morning of the 19th the disturbance had passed to the mouth of the St. Lawrence. No high-pressure area of consequence immediately followed this low, although pressure was above normal in the South Atlantic and East Gulf States.

The following weekly forecast was issued Sunday, November 19:

The indications are that the coming week will be one of mostly fair weather and seasonal temperature throughout the country. Rains will continue, however, in the North Pacific States during the next several days and snow flurries are probable at intervals on the Great Lakes. The next disturbance of importance to cross the country will appear in the Northwest Monday or Tuesday and move thence along the northern border to the St. Lawrence Valley, reaching the latter district about Friday. This disturbance will be attended by local snows in the northern States and be followed by a change to colder weather over the northern half of the country. This change will appear in the Northwestern States about the middle of the week.

A low appeared over Manitoba on the 19th, advanced to the southern Michigan Peninsula by the morning of the 20th, and by the morning of the 21st was central off Nantucket, Mass. The storm moved thence northeastward with increasing intensity and was central on the morning of the 22d south of Newfoundland, the pressure reading reported from Sydney, Cape Breton Island, on that date being 29.18 inches. Before the morning of the 22d the low was of relatively slight intensity. Rains and snows occurred in the region of the Great Lakes, New England, and the northern portion of the Middle Atlantic States. A high-pressure area developed over the eastern slope of the Rocky Mountains and was central on the morning of the 20th over Nebraska and advanced by the morning of the 21st to the middle Mississippi Valley, with increased intensity. By the morning of the 22d it was central over West Virginia, having caused changes to cooler weather over central and southern districts and frosts on the 22d in the east Gulf and south Atlantic States, except Florida. It moved thence slowly eastward to the middle Atlantic coast by the morning of the 23d. The next storm of importance to cross the country appeared on the extreme North Pacific coast on the morning of the 20th, light rains and high winds being reported from that region during the following night and next day. Storm warnings were issued during the early morning of the 20th. On the morning of the 21st this storm had moved to Alberta and by the morning of the 22d was over northwestern Minnesota. Its trough extended to the Texas Panhandle and rains were reported in the southern Plains States and in Texas. On the morning of the 23d the storm was central north of Lake Superior with slightly increased intensity, rains and snows being reported in the Mississippi and Ohio Valleys and also in the Gulf States in connection with a secondary low area which was central in that region. By the morning of the 24th the northern low had moved to the Province of Quebec, the trough formation still in evidence with the secondary, 29.70 inches, at Washington, D. C. The secondary moved eastward and by noon of that date was central off the New Jersey coast with rapidly decreasing pressure. By the evening of that date, it was central off Nantucket, Mass., with lowest reported pressure 29.34 inches, and by the morning of the 25th was over Nova Scotia with lowest reported pressure 29.00 inches. On the morning of the 24th storm warnings were issued for high northwest winds from Jacksonville to Delaware Breakwater and before noon they were extended to Boston and at 1.20 p. m. to Eastport, Me. Severe gales occurred on the Atlantic seaboard and caused considerable damage to shipping in spite of the warnings. Well-distributed rains in southern and snows in northern districts were reported in connection with this storm. On the 22d a high-pressure area was central over the Plateau region and on the evening of that date another high showed over Saskatchewan with temperatures below zero. The high pressure advanced slowly eastward and southeastward and by the evening of the 23d was over the Plains States, temperatures below zero being reported on the morning of that date over North Dakota. The axis of the high extended on the morning of the 24th from Louisiana to northern Nevada, showing indications of the formation of a separate high over Oklahoma, with temperatures below freezing in that section. Falls ranging from 20° to 28° in 24 hours were reported in the central and west Gulf States, and by the following morning the change to colder had advanced to the Atlantic coast, temperatures below freezing being reported in northern Florida and frost in the Gulf and portions of the south Atlantic States. By the morning of the 26th the high had advanced to the central Gulf coast and frosts were again reported in that section, and by the morning of the 27th it was central off the middle Atlantic coast.

Ample and timely warnings were given of the frosts and colder weather. A low advanced along the northern border from Alberta on the 23d to Manitoba on the 24th, western Ontario on the 25th, and eastern Ontario on the 26th.

The following weekly forecast was issued Sunday, November 26:

The coming week will be one of generally fair weather in the Eastern and Southern States, and the first half of the week will be fair in the Middle West. A disturbance that is developing over the Plains States, however, will be attended by snows Monday and Tuesday in the region of the Great Lakes and local rains or snows Monday night or Tuesday in the North Atlantic States. Following this disturbance a change to colder weather will overspread the Middle West Monday and the Eastern and Southern States Tuesday and Tuesday night. The next disturbance to cross the United States will appear on the North Pacific coast Wednesday or Thursday and prevail over the Middle West at the close of the week. This disturbance will be preceded by a general change to warmer weather, be attended by rains in southern and snows in northern districts, and be followed by a pronounced change to colder weather which will make its appearance in the Northwest about December 3. It is probable that this disturbance will cause general rains the latter half of the week on the Pacific slope.

A low-pressure area appeared over Saskatchewan on the evening of the 25th and advanced to the Plains States by the following morning. On the morning map of the 27th two centers appeared—one over Lake Michigan and the other over Oklahoma—and light precipitation in the form of snow was reported over the eastern Rocky Mountain region and the Plains States. On the morning of the 28th the main center was over the Michigan Peninsula, with evidence of a secondary over Georgia. Snows and rains were reported quite generally east of the Rockies, except in New England and in New York and eastern Pennsylvania. By the morning of the 29th one center was over New Brunswick, with lowest pressure 29 inches, and precipitation had overspread New England. Gales were reported during the 27th on the Gulf coast and on the 28th on the Great Lakes and Atlantic coast, warnings of which were issued in advance of their occurrence. This low was followed by a high which was central over British Columbia on the evening of the 26th. It remained stationary for 12 hours and increased in intensity. By the evening of the 27th it had advanced to western Montana, with highest pressure reading 30.90 inches, and with lowest temperatures reported ranging from 14 to 16°. The center of the high remained over the plateau region, although pressure increased rapidly following the eastward movement of the preceding low and was attended by changes to much colder weather to the Atlantic coast, particularly low temperatures for the season being reported in the Gulf States. On the morning of the 29th an offshoot from this high developed over Texas, causing the lowest temperatures of record for the month of November at Galveston and temperatures approximating the lowest ever before recorded for the month at several other stations in that section. By the morning of the 30th the high was over eastern Texas and Louisiana, causing killing frosts to the east Gulf coast and frosts in northern Florida, a killing frost being reported at Gainesville, Fla. The cold weather and frosts were successfully forecast. At the end of the month the high was central off the Louisiana coast. From the morning of the 28th a low advanced along the northern border from Alberta and was central at the close of the month over the Province of Quebec, no precipitation of consequence being reported.

The following is an editorial from the Times-Democrat, of New Orleans, La., dated December 3, 1911, regarding the warnings of the colder weather that occurred on the 13th and 27th:

It is impossible as yet to determine definitely and accurately the damage and loss to the Louisiana cane crop caused by the two recent freezes. It is unquestionably heavy, but how heavy we will not know until a careful examination has shown the condition of the cane. It is believed that it will be possible to determine this point in the next few days, and that we will then know within a few thousand dollars how much Louisiana has lost by the two unexpected and early freezes of last month.

Louisiana, and New Orleans in particular, has counted with great confidence on its sugar crop. The acreage was larger than usual; the cane, although a little backward, was in good condition and promised an exceptionally large tonnage to the acre; and finally, sugar is commanding a better price than for years past. A profit on the crop of between $7,000,000 and $10,000,000 over last year was looked for; and the circulation of that money promised activity in every line of business.

Suddenly and unexpectedly there descended on the sugar belt the freeze of November 13. It was one of the earliest freezes ever known in this section, and caught the planters unprepared, when they had only just begun their grinding. Fortunately the freeze continued only a few hours, so that the loss was not as heavy as it would otherwise have been. Two weeks afterwards, on November 27, came another freeze, more far reaching, more severe, and far more damaging. It is the uncertainty as to the amount of this damage that renders it impossible to figure out the exact loss.

If we look back to the old records, before the Government established the Signal Service or Weather Bureau, we will find that the damage from premature freezes of this kind brought overwhelming ruin to the cane crop, and that in many years the crop was injured three-fourths and more. The planters had nothing to guide them as to the weather, no notice of the coming of a freeze until it was on them. To-day, because we know more of the weather, the loss is not likely to be over 15 per cent.

It is difficult to appreciate how much these weather forecasts mean to the cane growers, for perhaps no crop is in greater danger from sudden changes than sugar cane. Both of the recent freezes were sudden. The wind which carried the cold wave of November 13 to the sugar belt was blowing 40 to 50 miles an hour. It was impossible, therefore, to predict the freeze more than 40 hours in advance; but these 40 hours given the sugar planters to prepare were invaluable and saved Louisiana from millions of dollars of loss. The second freeze was predicted, or rather announced, 2 days in advance of its arrival, and gave the planters ample time to get ready for their enemy. These warnings saved the greater part of the crop, and were valuable not only for the present, but for future years, for they enabled the planters to save the seed cane. But for that we would have had to reduce our cane acreage next year.

The county correspondents of the Louisiana Planter furnish some valuable information on this point. Thus from Iberville we learn that a majority of the planters heeded the warning at once, began to windrow the moment the Weather Bureau informed them a cold wave was on its way here, and they thus saved their crop.

In Assumption a number of planters did not believe the warning, and will lose heavily in consequence of their failure to windrow. But the strongest evidence comes from Lafayette, where the Planter's correspondent remarks:

"Fortunately the United States Weather Bureau gave timely warning of the coming freeze, and those planters who had standing cane were able to put it in windrows before the cold blast struck the country. A few, however, were caught, not fully appreciating the warning and trusting to luck that, after all, Uncle Sam's prediction as to destructive cold approaching might not come true. It is therefore quite certain that there will be some further loss, not only of standing cane, but of much exposed in heap rows."

Probably next time they will give better heeding to these warnings. The weather reports have vindicated themselves and proved their value; and with this protection, and notice properly utilized by the planters, the cane crop will be better protected against sudden changes in weather conditions and the crop made more certain. The Weather Bureau in its predictions, especially as far as freezes go, has made great progress in the last few years, and we may hope for still further improvement as the science of meteorology progresses.

Average temperatures and departures from the normal.

Districts.	Number of stations.	Average temperatures for the current month.	Departures for the current month.	Accumulated departures since Jan. 1.	Average departures since Jan. 1.
New England	12	39.0	−0.4	+ 3.3	+0.3
Middle Atlantic	15	41.8	−2.1	+ 7.9	+0.7
South Atlantic	10	52.1	−2.0	+19.4	+1.8
Florida Peninsula [1]	9	68.5	+2.2	+19.8	+1.8
East Gulf	11	53.1	−2.6	+27.0	+2.5
West Gulf	12	53.6	−3.7	+29.7	+2.7
Ohio Valley and Tennessee	15	39.9	−3.9	+19.4	+1.8
Lower Lakes	10	36.4	−2.5	+ 9.5	+0.9
Upper Lakes	13	31.1	−3.2	+17.6	+1.6
North Dakota [1]	8	16.6	−8.8	−10.9	−1.0
Upper Mississippi Valley	14	32.6	−5.1	+17.9	+1.6
Missouri Valley	12	33.0	−4.4	+24.6	+2.2
Northern slope	10	26.5	−5.6	− 4.7	−0.4
Middle slope	6	39.2	−2.6	+23.8	+2.2
Southern slope [1]	8	47.2	−3.0	+28.9	+2.6
Southern plateau [1]	9	46.8	−2.4	− 1.5	−0.1
Middle plateau [1]	10	33.9	−3.1	− 0.8	−0.1
Northern plateau [1]	11	34.4	−2.8	−10.0	−0.9
North Pacific	7	44.6	−0.5	−10.8	−1.0
Middle Pacific	5	53.2	−0.3	−13.7	−1.2
South Pacific	4	59.3	+2.2	+ 2.0	+0.2

[1] Regular Weather Bureau and selected cooperative stations.

Average precipitation and departures from the normal.

Districts.	Number of stations.	Average.		Departure.	
		Current month.	Percentage of normal.	Current month.	Accumulated since Jan. 1.
New England	11	4.27	120	+0.70	− 3.50
Middle Atlantic	15	3.52	146	+1.10	− 3.70
South Atlantic	11	2.43	83	−0.50	−15.40
Florida Peninsula [1]	9	5.08	233	+2.90	−10.00
East Gulf	11	4.47	125	+0.90	− 4.30
West Gulf	10	2.45	80	−0.60	− 7.20
Ohio Valley and Tennessee	13	3.50	100	0.00	− 0.60
Lower Lakes	10	2.89	97	−0.10	+ 0.50
Upper Lakes	13	3.53	146	+1.10	+ 1.60
North Dakota [1]	8	0.79	134	+0.20	+ 1.10
Upper Mississippi Valley	15	2.55	124	+0.50	+ 0.70
Missouri Valley	12	0.93	76	−0.30	− 4.60
Northern slope	9	1.15	136	+0.30	− 0.40
Middle slope	6	0.59	60	−0.40	− 4.10
Southern slope [1]	8	0.80	50	−0.80	− 6.30
Southern plateau [1]	10	0.21	34	−0.40	+ 3.20
Middle plateau [1]	11	0.56	66	−0.30	+ 0.90
Northern plateau [1]	11	1.52	94	−0.10	− 2.20
North Pacific	7	5.66	77	−1.70	+ 3.50
Middle Pacific	7	0.77	24	−2.40	− 0.20
South Pacific	4	0.19	15	−1.10	+ 5.80

[1] Regular Weather Bureau and selected cooperative stations.

Average relative humidity and departure from the normal.

Districts.	Average.	Departure from normal.	Districts.	Average.	Departure from normal.
New England	74	−4	Missouri Valley	71	0
Middle Atlantic	72	−3	Northern slope	74	+ 7
South Atlantic	76	−2	Middle slope	62	0
Florida Peninsula	84	+4	Southern slope	58	− 4
East Gulf	72	−4	Southern plateau	51	+ 8
West Gulf	65	−9	Middle plateau	59	+ 1
Ohio Valley and Tennessee	74	+1	Northern plateau	58	−16
Lower Lakes	76	−1	North Pacific	85	+ 1
Upper Lakes	80	0	Middle Pacific	64	−11
North Dakota	87	+8	South Pacific	52	−15
Upper Mississippi Valley	76	+2			

Average cloudiness and departure from the normal.

Districts.	Average.	Departure from normal.	Districts.	Average.	Departure from normal.
New England	6.4	+0.6	Missouri Valley	5.0	+0.2
Middle Atlantic	6.2	+0.9	Northern slope	5.9	+1.1
South Atlantic	5.4	+0.9	Middle slope	4.2	+0.3
Florida Peninsula	6.0	+1.5	Southern slope	4.1	−1.1
East Gulf	5.2	−0.6	Southern plateau	2.2	−0.6
West Gulf	5.0	−0.4	Middle plateau	3.8	−0.1
Ohio Valley and Tennessee	6.7	+1.0	Northern plateau	6.4	+0.6
Lower Lakes	7.6	+0.3	North Pacific	8.2	+0.7
Upper Lakes	7.6	+0.5	Middle Pacific	3.2	−1.3
North Dakota	5.8	+0.4	South Pacific	2.3	−1.0
Upper Mississippi Valley	6.5	+1.3			

Maximum wind velocities.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Block Island, R. I.	2	52	nw.	Mount Weather, Va.	19	50	nw.
Do	7	50	w.	Do	24	64	nw.
Do	12	62	nw.	Do	25	66	nw.
Do	13	50	nw.	New York, N. Y.	2	60	nw.
Do	18	52	sw.	Do	7	64	w.
Do	25	58	nw.	Do	12	72	nw.
Buffalo, N. Y.	7	64	sw.	Do	13	56	nw.
Do	12	72	w.	Do	16	54	nw.
Do	13	50	w.	Do	18	64	sw.
Do	17	54	s.	Do	19	54	nw.
Do	18	66	sw.	Do	25	60	nw.
Do	19	62	w.	Do	28	60	sw.
Do	28	64	w.	North Head, Wash.	8	64	nw.
Do	29	60	sw.	Do	9	64	nw.
Do	30	56	sw.	Do	11	72	se.
Burlington, Vt.	11	50	s.	Do	12	78	se.
Do	12	54	s.	Do	14	56	s.
Canton, N. Y.	12	54	w.	Do	20	66	s.
Cleveland, Ohio	6	56	se.	Oklahoma, Okla.	11	54	nw.
Do	12	58	sw.	Do	27	62	nw.
Do	18	52	w.	Pensacola, Fla.	12	56	nw.
Corpus Christi, Tex.	12	51	n.	Pittsburg, Pa.	12	50	w
Dayton, Ohio	11	50	s.	Pt. Reyes Light, Cal.	5	50	nw.
Do	12	54	s.	Do	6	50	nw.
Detroit, Mich.	12	56	w.	Do	7	70	nw.
Do	18	50	w.	Do	15	67	nw.
Duluth, Minn.	10	50	w.	Do	16	51	nw.
Do	17	50	nw.	Do	20	58	nw.
Do	18	50	nw.	Do	21	55	nw.
Eastport, Me.	13	50	s.	Reno, Nev.	9	54	w.
El Paso, Tex.	11	51	w.	Seattle, Wash.	20	52	sw.
Flagstaff, Ariz.	10	50	sw.	Sheridan, Wyo.	6	50	nw.
Fort Smith, Ark.	11	55	nw.	Southeast Farallon, Cal.	10	50	nw.
Hannibal, Mo.	11	54	sw.	Do	21	52	nw.
Indianapolis, Ind.	11	52	s.	Springfield, Mo.	11	54	nw.
Kansas City, Mo.	11	50	nw.	Syracuse, N. Y.	28	50	s.
Lincoln, Nebr.	11	50	nw.	Tatoosh Island, Wash.	8	58	w.
Little Rock, Ark.	11	52	nw.	Do	11	52	e.
Memphis, Tenn.	11	60	nw.	Do	12	64	s.
Modena, Utah	10	60	sw.	Do	14	62	sw.
Mt. Tamalpais, Cal.	7	64	nw.	Do	20	70	s.
Do	8	78	nw.	Do	21	51	w.
Do	9	67	nw.	Do	26	56	ne.
Do	11	52	nw.	Do	27	64	ne.
Do	15	57	n.	Do	28	52	ne.
Mount Weather, Va.	7	52	w.	Wichita, Kans.	13	53	s.
Do	8	52	nw.				
Do	12	66	nw.				
Do	18	60	nw.				

RIVERS AND FLOODS, NOVEMBER, 1911.

By H. C. FRANKENFIELD, Professor in Charge of River and Flood Division.

The only flood of consequence during the month of November occurred in the Illinois River. This river had been in flood during the month of October, and had fallen but little below the flood stage by November 12 when another rise set in as a result of moderate rains over the upper watershed. By November 19 the river at La Salle, Ill., had reached a stage of 20.6 feet, 2.6 feet above the flood stage, and it was reported that 15 per cent of the Illinois Valley corn crop in that section was destroyed by the flood. The river was also from 1 to 2 feet above the flood stage at all points below La Salle.

There were also moderate floods in the Santee and Wateree Rivers of South Carolina, due to heavy rains on November 8 and 9. The Wateree River, at Camden, S. C., reached a stage of 23.5 feet, 0.5 foot below the flood stage, on November 10, while below that point flood stages were exceeded by from 1 to 2 feet. Rimini, S. C., on the Santee River, reported a stage of 13.9 feet, 1.9 feet above the flood stage, on November 14, and Ferguson, S. C., a stage of 13.5 feet, 1.5 feet above the flood stage, on November 16. Warnings were issued on November 10, and no damage was reported.

ICE.

Milk River, at Havre, Mont., was closed by ice on November 8, and the James River, at Huron, S. Dak., on November 10. The Missouri River, at Bismarck, N. Dak., closed on November 10; at Pierre, S. Dak., on November 13, the earliest closing of record. Floating ice was observed in the lower river, reaching Hermann, Mo., on the last day of the month. Ice was frequently observed in the rivers of Kansas and several were frozen over for a few days. The Mississippi River closed at Fort Ripley, Minn., on November 12; at St. Paul, Minn., on November 12 (shore only, the channel remaining open until November 29); at Red Wing and Reeds Landing, Minn., and La Crosse, Wis., on November 19; and at Prairie du Chien, Wis., and Le Claire, Iowa, on November 26. Below Le Claire the river remained open, but at times with floating ice that by the end of the month had reached St. Louis. Navigation at Keokuk closed on November 17.

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport, on the Red.

SPECIAL PAPERS ON GENERAL METEOROLOGY.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

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RECENT PAPERS BEARING ON METEOROLOGY.

C. FITZHUGH TALMAN, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers and other communications bearing on meteorology and other cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled. It shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a ———.

Geographical journal. London. v. 38. December, 1911.
Mill, Hugh Robert. Prof. Hellmann on the floods of the Oder. p. 601–604. [Review and abstract.]

Nature. London. v. 88. 1911.
Shaw, W[illiam] N[apier]. The weather of 1911. p. 141–142. [Nov. 30.]
Deeley, R. H. Temperature of the upper atmosphere. p. 211–212. (Dec. 14.) [With diagrams based on about 5,800 readings.]

Scientific American. New York. v. 105. December 23, 1911.
——— A record rainstorm in the Philippines. p. 570.

South African journal of science. Cape Town. v. 8. November, 1911.
Innes, Robert T. A. South African climatic conditions in relation to aviation. p. 125–127.

Académie des sciences. Comptes rendus. Paris. Tome 153. 13 novembre 1911.
Le Cadet, G. Sur l'origine des manifestations électriques des orages, à l'occasion de l'observation des cyclones en mer de Chine. p. 985–986.
Vallot, J. Sur la protection contre la foudre des observatoires de grande altitude. p. 986–988.

Astronomie. Paris. 25 année. Décembre 1911.
——— Le halo solaire du 12 octobre 1911. p. 509–512. [Illustrated.]

Bulletin agricole du Congo Belge. Bruxelles. v. 2. No. 3. Septembre 1911.
——— Observations pluviométriques à Baudoinville (Katanga). p. 559–560.

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V., V. D. Les laboratoires scientifiques du Mont Rose. p. 365–369.
Guilbert, Gabriel. Relation entre les variations de pression et les calmes nocturnes. p. 369–371.

Geographische Zeitschrift. Leipzig. 17. Jahrgang. 11. Heft. 1911.
Hettner, Alfred. Die Klimate der Erde. p. 618–633.

Netherlands. Meteorologisch Instituut. Mededelingen en verhandelingen. Utrecht. No. 11. 1911.
Everdingen, E. von. Drachenbeobachtungen an Bord I. Ms. Panzerschiff "de Ruyter," angestellt vom Marineleutenant A. F. Rambaldo während der Fahrt nach Ost-Indien und während des Aufenthalts im W.-Indien, Dez. 1908–Juli 1909. p. 3–36.

Meteorologische Zeitschrift. Braunschweig. Band 28. November, 1911.
Lenard, P. Über die Strahlen der Nordlichter und deren Absorption in der Erdatmosphäre. p. 481–487.
——— Carl Störmer über einige Resultate der photogrammetrischen Messungen der Höhe der Nordlichter zu Bossekop im Februar und März 1910. p. 487–488. [Extr. Compt. rend.]
Lottermoser, [Eckhard]. Meteorologische Beobachtungen in den Republiken Guatemala und Salvador. p. 509–511.
Kassner, C[arl]. Über die Häufigkeit des Regenbogens in Norddeutschland. p. 489–496.
Bahr, H[einrich]. Die interdiurne Veränderlichkeit des Luftdruckes. p. 497–502.
Bötel, Th. Ergebnisse der Beobachtungen des Zuges der Wolken über Hildesheim. p. 502–508.
Schmauss, A. Höhe, Temperatur und Luftdruck an der Grenze von Troposphäre und Stratosphäre über München. p. 513–518.
Maurer, J. Neue Versuche zur Registrierung der Sonnenscheindauer. p. 518–520.
Spitaler, Rudolph. Die Wärmestrahlung der Milchstrasse als mögliche Ursache der Eis- und Interglazialzeiten der Erde. p. 522–524.
Staikoff, St. D. Ausgleichung einer Reihe beobachteter Grössen. p. 524–528.
Ficker, H[einrich] v. Der physiologische Einfluss der Föhnwinde. p. 530–534. [Explains the physiological effects of the foehn as due to rapid small fluctuations of barometric pressure.]
Exner, F. M. Über den "Strahlungskoeffizienten" der atmosphärischen Luft. p. 534–535.
Schmidt, Ad[olf]. Bemerkungen über die Aufstellung von Näherungsformeln zur harmonischen Analyse. p. 536–538.
Hennig, R[ichard]. Wahrnehmung eines Gewitters in grosser Entfernung. p. 538. [Records an interval of 96 seconds between lightning and thunder.]

Prometheus. Berlin. Jahrgang 23. 25. November 1911.
Frank, H. Die Erforschung der höheren Luftschichten. p. 113–116.

Wiener Luftschiffer-Zeitung. Wien. 10. Jahrgang. 15. November 1911.
Hess, Viktor F. Aëronautische Radiumforschung. p. 413–416.

CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given, for the various sections of the Climatological Service of the Weather Bureau, the average temperature and rainfall, the stations reporting the highest and lowest temperatures, with dates of occurrence, the stations reporting the greatest and least monthly precipitation, and other data, as indicated by the several headings.

The mean temperatures for each section, the highest and lowest temperatures, the average precipitation, the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperature and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

Temperature and precipitation by sections, November, 1911.

Sections.	Temperature (°F.).							Precipitation (inches and hundredths).					
	Section average.	Departure from the normal.	Monthly extremes.					Section average.	Departure from the normal.	Greatest monthly.		Least monthly.	
			Station.	Highest.	Date.	Station	Lowest.	Date.			Station.	Amount.	Station.	Amount.
Alabama	50.6	−3.8	2 stations	87	6	2 stations	11	25†	4.46	+1.57	Birmingham	6.43	Greenville	2.47
Arizona	49.8	−3.2	Douglas	92	14	Flagstaff (2)	− 5	29	0.03	−0.84	Douglas	0.56	Many stations	0.00
Arkansas	46.8	−4.2	2 stations	86	11	Bergman	5	12	3.18	−0.46	Malvern	4.84	Junction	1.41
California	51.1	−0.9	San Jacinto	97	7	Tamarack	− 8	11	1.00	−1.98	Weitchpec	7.53	26 stations	0.00
Colorado	30.3	−4.2	Las Animas	78	16	Fraser	−33	29	1.07	−0.01	Corona	5.55	Holyoke	T.
Florida	65.7	+1.6	Orange City	93	10	Molino	20	30	4.16	+1.89	Homestead	10.49	Carrabelle	1.24
Georgia	51.6	−3.2	Milien	88	12	Mineral Bluff	16	13†	3.93	+1.35	Newnan	7.91	Savannah	1.23
Hawaii [October]	71.8	.....	Mana Pump	90	2	Humuula	45	10	3.59	.....	Honomu	18.66	Waikil	0.02
Idaho	32.3	−4.5	Pierson	72	2	Driggs	−24	28	2.37	+0.08	Wallace	7.44	Buhl	0.14
Illinois	36.1	−4.6	Golconda	84	11	Lanark	− 2	29	3.05	+0.42	Dixon	5.47	Lincoln	1.59
ndiana	37.5	−4.6	Mount Vernon	79	11	Judyville	− 2	13	3.44	+0.27	Vevay	5.90	Farmersburg	1.88
Iowa	29.9	−6.0	Keokuk	79	11	Guthrie Center	− 8	12	1.42	+0.03	Le Claire	4.99	Odebolt	0.11
Kansas	38.7	−4.0	Independence	83	11	Coolidge	− 5	12	0.85	−0.24	Columbus	2.99	Russell	T.
Kentucky	41.7	−4.1	Hopkinsville	85	11	2 stations	9	13	4.52	+0.70	Franklin	6.03	Shelbyville	3.00
Louisiana	55.5	−3.2	Plain Dealing	94	11	Farmerville	11	29	4.13	+0.65	Cheneyville	7.00	Paradis	0.97
Maryland and Delaware.	42.6	−1.8	Porto Bello, Md	82	18	Deer Park, Md	6	13	4.13	+1.37	Salisbury, Md	8.85	Cumberland, Md	1.87
Michigan	32.3	−3.0	Ganges	78	11	Humboldt	−12	16	3.62	+1.09	Grand Haven	2.18	Mount Pleasant	0.64
Minnesota	20.2	−8.6	Redwood Falls	55	9	Angus	−36	15	1.12	−0.03	Duluth	2.59	Pipestone	T.
Mississippi	51.1	−4.1	2 stations	89	6†	Holly Springs	12	30	4.30	+1.07	Hickory	6.79	Tupelo	2.21
Missouri	39.1	−5.2	Gano	93	11	Oregon	− 3	12	2.55	+0.15	Crocker	4.63	St. Charles	0.37
Montana	25.7	−6.2	2 stations	64	20†	Augusta	−36	11	1.40	+0.23	Saltese	6.70	Shelby	T.
Nebraska	31.7	−4.8	Westpoint	68	9	Mitchell	−15	12	0.24	−0.44	Nebraska City	1.10	2 stations	0.00
Nevada	36.7	−2.7	Logan	76	6	Wells	− 9	12	0.26	−0.45	Lewers Ranch	1.75	4 stations	0.00
New England	37.0	−0.9	Hawleyville, Conn	71	7	Patten, Me	0	26	4.21	+0.10	Kingston, R. I	8.99	Chelsea, Vt	1.55
New Jersey	41.3	−1.6	4 stations	73	12	2 stations	13	23	5.17	+1.77	Tuckerton	6.50	Newton	3.17
New Mexico	38.9	−3.3	Carlsbad	83	10	Elizabethtown	−23	28	0.39	−0.30	Anchor Mine	4.01	15 stations	0.00
New York	34.6	−2.2	Appleton	71	12	Old Forge	−10	17	2.91	−0.11	Wading River	8.96	Hemlock Lake	0.74
North Carolina	47.5	−2.5	Willard	82	12	2 stations	8	13	3.75	+0.84	Enfield	5.96	Wilmington	1.04
North Dakota	16.7	−9.5	Bismarck	58	4	do	−33	15	0.65	+0.09	Mott	1.62	Pratt	0.10
Ohio	37.6	−3.1	Milligan	79	10	Killbuck	8	13	2.91	+0.19	Piqua	4.27	Somerset	1.51
Oklahoma	45.6	−4.4	4 stations	89	11	Hurley	− 3	28	0.90	−1.19	Webbers Falls	2.70	Kenton	0.10
Oregon	41.1	−1.0	McKenzie Bridge	75	2	Cliff	−11	11	4.14	−2.00	Trask	22.37	Huntington	0.08
Pennsylvania	37.8	−2.6	Hamburg	77	1	Somerset	7	13	2.84	−0.04	George School	5.68	Towanda	0.99
Porto Rico	77.0	0.0	2 stations	98	2†	Aibonito	54	23†	5.35	−1.79	Maricao	12.27	Ponce	1.16
South Carolina	51.2	−2.7	do	83	12	Greenville	19	30	3.30	+1.03	Liberty	4.76	Winnsboro	1.40
South Dakota	24.2	−7.8	do	62	4	Hardingrove	−20	12	0.99	−0.01	Frederick	4.49	2 stations	T.
Tennessee	45.1	−3.3	3 stations	80	11	Rugby	10	13	4.43	+0.77	Kenton	7.44	Elizabethton	1.87
Texas	53.0	−3.8	Falfurrias	96	17	Plemons	0	29	1.51	−0.91	Matagorda	5.79	Winters	0.00
Utah	34.1	−4.3	Iosepa	79	6	Scofield	−20	28	0.65	−0.28	Thistle	2.88	5 stations	0.00
Virginia	43.4	−2.5	Lebanon	76	11	Burkes Garden	5	13	3.62	+0.43	Lassiter	6.10	Buchannan	2.01
Washington	37.9	−2.2	Gold Basin	79	19	Republic	−15	11	5.41	−0.42	Quiniault	27.79	Moxee	0.03
West Virginia	40.4	−2.3	Bancroft	83	11	Bayard	7	13	2.74	+0.20	Pickens	5.54	Moorefield	1.27
Wisconsin	26.7	−6.1	Watertown	75	11	Solon Springs	−17	16	2.73	+1.04	Lake Mills	4.71	Mondovi	1.13
Wyoming	24.8	−6.1	Foxpark	70	21	Crazy Creek	−34	19	1.40	+0.37	Snake River, Y. N. P.	5.60	Wheatland	0.08

† Other dates also.

TABLE I.—*Climatological data for United States Weather Bureau stations, November, 1911.*

Districts and stations.	Elevation of instruments.			Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.										Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Precipitation, inches.			Wind.				Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow on ground at end of month.
	Barometer above sea level, feet.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.					Total.	Departure from normal.	Days with 0.01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.						
New England.							**39.0**	**− 0.4**											**74**	**4.27**	**+ 0.7**								**6.4**		
Eastport	76	67	85	29.82	29.90	−0.11	36.4	− 0.4	58	13	43	17	26	29	32	34	31	80	3.83	− 0.2	14	10,361	sw.	50	s.	13	0	14	16	7.8	5.3	T.
Greenville	1,070	6	....	28.71	29.91	.....	29.4	.....	58	{12 13}	37	8	26	22	37	.....	.....	.....	.....	3.86	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	11.0	.....
Portland, Me.	103	81	117	29.83	29.95	− .09	37.4	− 0.2	64	7	45	19	17	30	24	32	25	63	3.51	− 0.3	13	7,493	w.	50	s.	12	9	8	13	5.7	1.2	....
Concord	288	70	79	29.64	29.96	− .10	36.2	− 0.6	67	12	45	19	17	28	32	.....	.....	.....	.....	3.03	− 0.4	13	4,684	w.	29	sw.	12	5	14	11	6.3	4.7	....
Burlington	404	11	48	29.50	29.96	− .09	34.0	+ 0.3	65	12	40	12	17	28	33	.....	.....	.....	.....	1.56	− 1.0	15	10,519	s.	54	s.	12	2	7	21	7.9	3.9	T.
Northfield	876	16	60	29.00	29.97	− .08	31.2	− 0.8	63	12	40	6	17	22	33	28	25	81	2.17	− 0.4	17	6,213	s.	35	s.	12	4	7	19	7.5	8.1	T.
Boston	125	115	188	29.84	29.98	− .07	41.8	+ 0.6	68	12	50	25	17	34	28	38	33	72	4.29	+ 0.2	11	8,843	w.	38	sw.	12	10	10	10	5.4	0.3	....
Nantucket	12	14	90	29.98	29.99	− .06	43.8	− 1.4	63	12	50	28	23	38	22	41	38	81	6.30	+ 3.0	16	12,813	w.	48	sw.	18	4	11	15	6.6	T.	....
Block Island	26	11	46	29.96	30.00	− .06	44.6	− 0.7	63	12	50	29	17	39	21	41	37	76	6.06	+ 2.2	15	16,361	nw.	62	nw.	12	4	11	15	6.2	.....	....
Narragansett	.....	9	.....	.....	.....	.....	41.5	− 0.8	63	12	50	20	14	33	37	.....	.....	.....	.....	7.92	.....	14	.....	sw.	.....	.....	.....	16	8	6	.....	T.	....
Providence	160	141	165	29.83	30.01	− .06	40.6	+ 0.2	67	12	49	22	17	32	30	37	32	76	5.61	+ 1.7	13	8,784	nw.	46	s.	12	10	12	8	5.5	T.	....
Hartford	159	122	140	29.84	30.02	− .06	39.5	0.0	67	12	48	23	14	32	35	34	29	71	4.18	+ 0.4	12	6,561	sw.	44	s.	12	5	13	12	6.4	1.1	....
New Haven	106	116	155	29.89	30.01	− .06	40.8	− 0.5	66	12	49	24	17	33	29	36	30	68	6.40	+ 2.8	12	7,218	w.	38	s.	12	9	12	9	5.4	0.3	....
Middle Atlantic States.							**41.8**	**− 2.1**											**72**	**3.52**	**+ 1.1**								**6.2**		
Albany	97	102	115	29.90	30.00	− .08	37.6	− 0.8	65	12	44	20	17	31	35	33	29	75	1.51	− 1.3	13	6,386	s.	36	s.	12	6	11	13	6.5	2.0	....
Binghamton	871	78	88	29.06	30.01	− .08	35.8	− 1.8	66	11	43	19	13	28	39	.....	.....	.....	.....	1.07	− 1.2	11	5,969	nw.	38	s.	12	2	5	23	8.5	1.3	....
New York	365	414	454	29.69	30.04	− .05	41.4	− 2.6	68	12	48	24	13	34	36	37	30	66	4.22	+ 0.8	11	15,216	nw.	72	nw.	12	8	11	11	6.0	1.0	....
Harrisburg	374	94	104	29.68	30.09	− .02	40.2	− 1.5	66	12	47	21	13	33	42	35	29	68	2.38	0.0	9	5,731	nw.	38	nw.	12	9	6	15	6.2	3.0	....
Philadelphia	117	123	184	29.94	30.08	− .02	43.5	− 1.4	71	12	51	26	13	36	43	39	32	67	5.58	+ 2.5	11	7,501	nw.	37	s.	12	7	11	12	6.1	T.	....
Scranton	805	111	119	29.17	30.05	− .04	38.0	− 1.1	66	11	46	21	13	30	39	34	30	73	1.86	− 0.4	8	6,143	s.	37	sw.	7	1	12	17	7.8	3.4	....
Atlantic City	52	37	48	30.02	30.08	− .02	44.0	− 1.5	66	7	52	24	14	36	33	40	36	74	5.86	+ 2.6	13	6,567	nw.	38	s.	28	9	11	10	5.5	.....	....
Cape May	17	9	56	30.08	30.10	.00	45.0	− 2.4	63	12	52	26	14	38	30	42	39	80	5.93	+ 2.7	15	7,486	nw.	36	e.	12	7	14	9	5.6	.....	....
Baltimore	123	100	113	29.96	30.10	− .01	43.8	− 2.0	71	12	51	22	13	36	44	39	33	68	4.28	+ 1.4	11	5,009	sw.	28	w.	18	8	13	9	5.5	T.	....
Washington	112	62	85	29.97	30.10	− .02	42.8	− 2.2	70	12	51	22	13	34	42	37	32	69	3.85	+ 1.1	9	5,495	nw.	42	nw.	12	8	11	11	5.8	T.	....
Cape Henry	18	9	58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Lynchburg	681	83	88	29.36	30.12	− .01	43.5	− 2.6	69	10	53	22	13	34	39	38	33	71	3.22	+ 0.4	12	3,374	nw.	26	nw.	12	9	8	13	5.9	T.	....
Mount Weather	1,725	10	54	28.19	30.07	− .05	37.6	− 2.8	61	11	45	13	13	30	42	33	27	69	2.43	− 0.4	10	15,578	nw.	66	nw.	12	8	9	13	6.0	T.	....
Norfolk	91	102	111	30.02	30.12	+ .01	49.8	− 1.4	74	12	58	30	13	41	32	44	40	72	4.12	+ 1.4	12	7,274	s.	39	nw.	24	10	8	12	5.6	.....	....
Richmond	144	189	197	29.97	30.12	.00	45.0	− 3.8	72	12	55	26	13	35	38	40	34	71	4.33	+ 1.9	11	5,841	sw.	36	sw.	12	13	5	12	5.8	.....	....
Wytheville	2,293	40	47	29.69	30.14	+ .01	39.0	− 4.0	73	11	49	13	13	29	39	34	30	78	2.10	− 0.9	12	5,153	w.	32	w.	12	11	8	11	5.3	1.0	....
South Atlantic States.							**52.1**	**− 2.0**											**76**	**2.43**	**− 0.5**								**5.4**		
Asheville	2,252	53	75	27.75	30.17	+ .03	41.8	− 3.3	70	11	53	13	13	31	48	36	32	74	2.20	− 1.1	10	7,869	nw.	38	n.	12	12	8	10	4.8	T.	....
Charlotte	773	68	76	29.29	30.14	+ .01	46.2	− 4.2	71	12	56	25	25	37	39	40	35	72	3.36	+ 0.5	10	4,640	ne.	29	sw.	18	11	6	13	5.9	.....	....
Hatteras	11	12	47	30.10	30.11	.00	55.6	− 1.1	72	12	63	37	13	48	28	52	50	84	1.05	− 3.6	9	12,047	ne.	48	nw.	24	11	12	7	4.9	.....	....
Manteo	12	12	46	.....	.....	.....	52.8	.....	71	27	62	26	{23 27}	44	.....	.....	.....	.....	.....	3.08	− 1.5	5	.....	nw.	.....	.....	.....	15	8	7	.....	.....	....
Raleigh	376	103	110	29.72	30.13	.00	47.8	− 2.4	75	12	58	26	30	38	40	42	36	69	4.26	+ 1.9	10	6,198	ne.	35	s.	28	11	7	12	5.5	.....	....
Wilmington	78	81	91	30.05	30.14	+ .02	53.4	− 0.7	78	12	64	29	25	43	35	48	43	76	1.04	− 1.4	10	6,035	w.	33	s.	28	12	8	10	4.9	.....	....
Charleston	48	11	92	30.08	30.13	+ .01	55.8	− 2.3	79	12	64	29	30	47	33	51	48	80	1.49	− 1.4	10	8,283	n.	37	n.	2	11	10	9	5.1	.....	....
Columbia, S. C.	351	41	57	29.76	30.15	+ .03	50.2	− 3.6	77	12	60	25	30	40	38	44	38	70	3.05	+ 0.8	11	5,170	ne.	30	sw.	12	11	6	13	5.7	.....	....
Augusta	180	89	97	29.95	30.15	+ .02	51.7	− 2.2	78	12	62	27	30	42	41	46	41	73	3.95	+ 1.0	9	4,822	w.	36	nw.	12	12	4	14	5.6	.....	....
Savannah	65	150	194	30.06	30.13	+ .01	56.2	− 1.3	80	12	65	28	30	47	36	50	46	75	1.23	− 1.1	8	8,669	ne.	44	nw.	24	7	13	10	5.9	T.	....
Jacksonville	43	96	129	30.06	30.11	+ .01	61.9	+ 0.6	85	7	70	29	30	54	33	57	54	82	2.68	+ 0.5	6	7,172	ne.	35	ne.	3	7	15	8	5.9	.....	....
Florida Peninsula.							**72.8**	**+ 3.4**											**84**	**5.28**	**+ 3.1**								**6.0**		
Key West	22	10	53	29.97	29.99	− .03	77.0	+ 2.7	86	9	81	54	30	73	16	73	71	83	6.00	+ 3.6	16	6,507	ne.	32	nw.	29	10	9	11	5.4	.....	....
Miami	25	37	72	30.00	30.03	.....	75.8	+ 3.8	87	7	81	45	30	70	24	71	69	83	5.94	+ 3.4	18	8,118	ne.	44	ne.	3	4	12	14	6.4	.....	....
Tampa	35	79	96	30.03	30.07	− .01	68.0	+ 2.6	86	10	76	39	25	60	30	63	61	85	3.91	+ 2.2	6	6,192	ne.	27	ne.	3	4	14	12	6.3	.....	....
Titusville	25	6	....	30.02	30.08	.....	70.6	+ 4.6	92	9	78	36	30	64	27	.....	.....	.....	.....	5.09	.....	19	.....	.....	.....	.....	.....	9	11	10	6.0	.....	....
East Gulf States.							**53.1**	**− 2.6**											**72**	**4.47**	**+ 0.9**								**5.2**		
Atlanta	1,174	190	216	28.89	30.16	+ .03	47.0	− 4.9	73	16	55	21	30	39	44	42	38	76	3.56	+ 0.2	11	10,026	w.	48	w.	12	11	3	16	6.3	.....	....
Macon	370	78	87	29.74	30.14	+ .01	51.2	− 2.1	75	12	61	27	30	41	41	.....	.....	.....	.....	2.94	− 0.2	12	4,981	nw.	30	nw.	12	13	4	13	5.3	.....	....
Thomasville	273	8	57	29.82	30.12	.00	56.6	− 1.9	84	7	68	25	30	45	42	50	47	81	2.53	− 0.1	12	4,118	nw.	24	sw.	18	12	7	11	5.9	.....	....
Pensacola	56	140	183	30.07	30.13	+ .02	58.3	− 1.3	80	7	67	25	30	50	25	.....	.....	.....	.....	3.98	+ 0.2	11	10,044	n.	56	nw.	12	12	9	9	5.1	.....	....
Anniston	741	9	57	29.37	30.18	+ .06	48.6	− 3.3	75	17	60	22	25	38	44	.....	.....	.....	.....	5.04	+ 1.6	11	5,093	nw.	31	nw.	12	9	6	15	6.0	T.	....
Birmingham	700	11	48	29.39	30.17	+ .05	49.8	− 4.3	78	6	60	22	30	40	46	42	37	69	6.43	+ 3.0	11	6,035	se.	33	nw.	12	12	10	8	4.7	T.	....
Mobile	57	98	106	30.07	30.13	+ .02	57.4	− 0.1	80	10	67	26	30	48	39	50	45	70	5.74	+ 2.0	8	6,359	n.	44	nw.	12	14	7	9	4.9	.....	....
Montgomery	223	100	112	29.91	30.17	+ .05	52.4	− 3.3	78	6	63	25	30	42	40	46	40	70	4.20	+ 1.1	9	5,377	n.	37	nw.	12	10	10	10	5.2	.....	....
Meridian	375	84	93	29.74	30.16	+ .04	50.6	− 2.6	83	11	62	20	30	40	45	44	39	72	5.82	+ 1.7	8	4,249	n.	38	nw.	12	15	7	8	4.7	.....	....
Vicksburg	247	62	74	29.89	30.18	+ .06	53.1	− 2.8	83	11	63	23	29	43	44	45	37	63	4.83	+ 0.6	9	5,668	se.	36	nw.	17	13	8	9	4.9	.....	....
New Orleans	51	90	121	30.08	30.14	+ .04	58.9	− 1.7	89	6	67	31	29	50	36	52	48	74	4.08	+ 0.3	6	7,018	n.	42	n.	12	12	8	10	5.0	.....	....
West Gulf States.							**53.6**	**− 3.7**											**65**	**2.45**	**− 0.6**								**5.0**		
Shreveport	247	77	84	29.88	30.16	+ .05	52.4	− 2.9	83	11	63	22	29	42	41	45	39	65	2.66	− 1.4	8	5,046	se.	32	nw.	27	14	5	11	4.8	.....	....
Bentonville	1,303	11	44	28.70	30.10	.00	42.5	− 4.2	80	11	54	10	12	31	65	.....	.....	.....	.....	2.30	− 0.7	10	4,632	s.	38	s.	11	16	6	8	4.3	2.7	T.
Fort Smith	457	79	94	29.62	30.12	+ .01	46.2	− 3.7	85	11	58	16	30	35	63	38	30	60	2.03	− 1.2	7	7,233	e.	55	nw.	11	17	3	10	4.2	T.	....
Little Rock	357	139	147	29.76	30.14	+ .02	47.0	− 4.5	81	11	57	19	30	37	49	41	35	65	4.00	− 0.6	9	7,775	nw.	52	nw.	11	14	4	12	4.6	T.	....
Brownsville	57	4	....	30.05	30.11	.....	64.0	− 2.0	88	10	74	27	30	54	33	.....	.....	.....	.....	1.54	.....	8	.....	n.	.....	.....	.....	.....	.....	.....	.....	.....	....
Corpus Christi	20	69	77	30.12	30.14	+ .07	60.4	− 3.0	83	17	68	29	30	53	32	54	48	71	1.49	− 0.9	6	9,094	n.	51	n.	12	6	9	15	6.5	.....	....
Fort Worth	670	106	114	29.40	30.12	+ .02	51.8	− 3.3	85	10	64	21	12	40	55	43	34	57	1.05	− 0.5	5	8,699	s.	42	nw.	27	13	7	10	4.5	.....	....
Galveston	54	106	112	30.10	30.16	+ .07	58.3	− 4.6	79	6	65	26	29	52	34	54	50	79	5.06	+ 1.0	6	9,284	se.	46	nw.	12	10	10	10	5.6	.....	....
Houston	138	111	121	30.00	30.15	.....	57.8	− 4.8	86	10	68	23	30	48	41	.....	.....	.....	.....	1.92	.....	8	6,172	se.	37	nw.	12	10	5	15	5.6	.....	....
Palestine	510	73	79	29.61	30.15	+ .04	52.7	− 4.2	85	10	63	21	29	42	44	46	38	62	2.35	− 1.3	7	6,711	s.	42	nw.	11	12	6	12	4.8	.....	....
San Antonio	701	80	91	29.40	30.14	+ .06	56.0	− 3.2	87	11	66	23	29	46	33	48	40	62	2.01	+ 0.2	8	4,213	n.	42	n.	11	9	7	14	5.9	.....	....
Taylor	583	55	63	29.53	30.15	+ .07	53.6	− 4.1	86	11	65	19	30	42	45	.....	.....	.....	.....	1.52	− 1.1	7	6,686	sw.	34	n.	11	17	6	7	3.9	.....	....
Ohio Valley and Tenn.							**39.9**	**− 3.9**											**74**	**3.50**	**0.0**								**6.7**		
Chattanooga	702	189	213	29.35	30.18	+ .04	45.8	− 4.5	73	12	55	18	13	37	49	40	36	74	4.23	+ 0.6	14	7,023	ne.	40	w.	12	13	2	15	5.8	0.1	....
Knoxville	996	93	100	29.07	30.15	+ .02	44.5	− 2.6	72	12	54	17	13	35	50	39	33	70	4.37	+ 0.8	10	3,941	sw.	33	sw.	12	7	14	9	5.7	1.0	....
Memphis	399	76	97	29.74	30.17	+ .05	47.2	− 4.2	79	11	56	20	13	38	35	40	33	63	4.14	− 0.4	9	7,540	sw.	60	nw.	11	14	1	15	5.2	T.	....
Nashville	546	108	191	29.57	30.17	+ .05	44.9	− 3.8	76	6	54	18	13	35	52	39	34	71	4.38	+ 0.5	10	8,182	se.	48	s.	11	10	6	14	5.8	T.	....
Lexington	989	75	102	29.04	30.14	+ .02	39.8	− 4.9	71	11	48	13	13	31	56	.....	.....	.....	.....	3.84	+ 0.4	10	9,473	w.	46	sw.	17	5	6	19	7.4	1.6	....
Louisville	525	111	132	29.54	30.14	+ .02	42.0	− 4.3	74	12	50	17	13	34	54	37	32	70	3.79	− 0.4	9	7,593	w.	44	w.	12	7	7	16	6.6	T.	....

TABLE I.—*Climatological data for United States Weather Bureau stations, November, 1911*—Continued.

Districts and stations.	Elevation of instruments.			Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.										Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Precipitation, inches.			Wind.					Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow on ground at end of month.
	Barometer above sea level, feet.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.				Total.	Departure from normal.	Days with 0.01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.						
***Ohio Valley and Tenn.*—Continued.**							**39.9**	**— 3.9**											**74**	**3.50**	**0.0**								**6.7**		
Evansville	431	72	82	29.64	30.13	+ .01	40.8	— 4.5	75	11	49	17	12	33	35	37	32	74	3.66	— 0.4	10	6,577	s.	47	s.	11	8	9	13	6.0	1.0	....
Fort Wayne	856	113	124	29.09	30.04	.....	35.2	— 5.4	70	11	42	10	13	28	44	32	28	77	3.75	.....	16	9,161	sw.	40	s.	11	3	9	18	7.3	4.5	....
Indianapolis	822	154	164	29.17	30.08	— .02	36.8	— 4.8	73	11	45	12	13	29	37	32	28	75	3.54	0.0	9	10,040	s.	52	s.	11	4	10	16	6.9	1.2	0.1
Cincinnati	628	152	160	29.42	30.12	.00	40.6	— 4.0	71	11	49	15	13	33	53	36	31	71	2.92	— 0.3	8	6,497	w.	35	w.	12	7	6	17	6.8	0.3	T.
Columbus	824	173	222	29.18	30.08	— .03	38.2	— 3.2	70	12	45	14	13	31	54	34	30	76	2.71	— 0.4	12	8,774	w.	46	w.	20	6	5	16	7.2	3.0	....
Dayton	899	181	216	29.11	30.09	.....	38.0	— 4.1	69	11	45	13	13	31	53	35	32	83	2.26	.....	11	10,742	sw.	54	s.	12	8	4	18	7.4	2.4	....
Pittsburgh	842	353	410	29.14	30.07	— .03	39.3	— 3.6	69	11	46	13	13	32	52	34	29	70	2.02	— 0.5	11	10,781	w.	50	w.	12	2	8	20	7.7	5.0	....
Parkersburg	638	77	84	29.44	30.12	.00	40.8	— 2.4	72	11	49	15	13	32	51	36	33	79	2.91	+ 0.1	10	5,420	s.	38	nw.	12	6	6	18	7.4	3.4	....
Elkins	1,940	41	50	28.00	30.12	.00	38.0	— 1.6	75	11	48	10	13	28	52	33	29	77	2.75	— 0.1	12	4,131	w.	32	nw.	12	6	7	17	7.0	2.5	T.
Lower Lake Region.							**36.4**	**— 2.5**											**76**	**2.89**	**— 0.1**								**7.6**		
Buffalo	767	178	206	29.13	29.98	— .07	37.3	— 2.0	69	12	44	18	13	31	47	34	31	79	3.58	+ 0.2	16	15,795	w.	72	w.	12	2	10	18	7.3	13.6	....
Canton	448	10	71	29.46	29.95	.....	32.7	— 1.2	67	11	40	7	17	26	38	.....	.....	.....	3.23	— 0.2	17	9,499	sw.	54	w.	12	2	7	21	7.8	10.2	0.6
Oswego	335	76	91	29.59	29.97	— .08	36.6	— 2.5	68	11	43	15	17	30	37	34	30	79	2.75	— 0.7	19	10,591	s.	43	sw.	29	1	6	23	8.4	5.6	....
Rochester	523	86	102	29.41	30.00	— .05	36.6	— 1.3	70	11	43	18	13	30	43	32	28	73	1.94	— 0.8	17	8,148	w.	40	w.	12	5	8	17	7.5	6.5	....
Syracuse	597	97	113	29.34	29.99	— .07	35.8	— 2.9	67	11	42	16	17	30	41	.....	.....	.....	1.49	— 1.2	17	11,700	s.	50	s.	28	3	5	22	8.1	6.6	....
Erie	714	92	102	29.21	29.99	— .07	38.0	— 3.1	71	12	44	16	13	32	53	34	29	73	3.14	— 0.5	19	11,401	sw.	46	s.	17	1	6	23	8.5	12.2	0.4
Cleveland	762	180	201	29.18	30.02	— .05	37.4	— 3.0	70	12	43	15	13	32	52	34	30	75	3.56	+ 0.8	16	13,926	sw.	58	sw.	12	1	7	22	8.3	7.6	....
Sandusky	629	62	70	29.32	30.02	— .06	37.2	— 3.6	70	12	44	13	13	31	55	.....	.....	.....	2.19	— 0.6	12	7,361	sw.	36	w.	12	4	13	13	6.8	2.9	....
Toledo	628	208	246	29.33	30.03	— .04	36.9	— 2.8	70	11	44	13	13	30	51	33	28	73	3.48	+ 0.8	15	13,871	sw.	57	s.	11	10	7	13	6.1	3.3	T.
Detroit	730	218	258	29.19	30.00	— .06	35.6	— 3.0	65	11	41	12	13	30	49	32	29	79	3.58	+ 1.0	14	12,967	w.	56	w.	12	2	13	15	6.7	7.0	....
Upper Lake Region.							**31.1**	**— 3.2**											**80**	**3.53**	**+ 1.1**								**7.6**		
Alpena	609	13	92	29.24	29.92	— .09	32.4	— 1.3	60	11	39	13	13	26	41	30	27	81	4.63	+ 2.1	16	10,114	w.	49	se.	17	2	9	19	8.1	17.0	1.2
Escanaba	612	48	82	29.24	29.92	— .11	29.2	— 2.5	53	11	36	3	13	23	35	27	23	77	3.43	+ 1.2	12	7,743	nw.	44	n.	28	5	6	19	7.5	18.1	4.5
Grand Haven	632	54	92	29.26	29.96	— .08	35.9	— 2.1	71	11	41	15	13	30	29	33	29	78	4.93	+ 2.4	18	11,971	w.	49	w.	12	3	9	18	7.8	8.6	....
Grand Rapids	675	70	87	29.18	29.97	— .08	35.2	— 2.9	72	11	41	14	13	29	33	33	31	85	3.88	+ 1.4	16	6,386	w.	31	sw.	12	3	6	21	8.2	6.2	....
Lansing	863	11	62	29.01	29.97	.....	33.8	— 2.0	68	11	41	12	16	27	40	30	27	81	3.40	+ 1.0	16	6,423	sw.	31	s.	11	2	6	22	8.0	8.2	T.
Houghton	668	66	74	29.16	29.91	— .11	27.4	— 4.1	46	10	33	8	13	22	21	.....	.....	.....	3.67	+ 0.9	16	7,942	nw.	45	w.	10	5	6	19	7.7	23.9	5.0
Marquette	734	77	116	29.11	29.93	— .09	29.0	— 2.9	60	11	35	4	13	23	31	27	23	79	4.68	+ 1.9	18	9,128	w.	38	s.	11	0	16	14	7.6	40.0	8.8
Port Huron	638	78	120	29.26	29.97	— .08	34.8	— 2.0	66	11	41	14	13	28	49	31	28	78	2.87	+ 0.2	13	10,396	sw.	45	w.	12	2	8	20	8.0	7.6	T.
Sault Ste. Marie	614	11	61	29.19	29.91	— .10	28.8	— 1.9	58	11	35	8	29	22	42	27	24	83	3.55	+ 0.6	19	5,543	e.	46	nw.	12	2	3	25	9.0	12.5	3.5
Chicago	823	140	310	29.10	30.02	— .05	35.4	— 3.8	74	11	42	12	13	29	42	32	28	76	3.27	+ 0.8	14	2,174	w.	48	s.	11	5	14	11	6.5	1.2	....
Milwaukee	681	122	138	29.21	29.97	— .08	32.2	— 3.9	73	11	39	9	29	26	43	30	26	80	2.49	+ 0.5	11	9,107	w.	45	se.	16	8	11	11	6.1	2.3	0.3
Green Bay	617	49	86	29.26	29.94	— .10	28.6	— 3.9	66	11	35	5	13	22	36	26	23	80	2.54	+ 0.6	14	9,608	sw.	45	n.	28	2	9	19	8.0	10.3	4.6
Duluth	1,133	11	47	28.71	29.98	— .06	21.4	— 7.9	40	8	29	— 2	13	14	28	19	17	87	2.59	+ 1.0	11	11,211	nw.	50	nw.	18	4	13	13	6.6	16.7	4.6
North Dakota.							**17.0**	**— 7.5**											**87**	**0.88**	**+ 0.1**								**5.8**		
Moorhead	940	8	57	29.01	30.07	.00	17.2	— 7.2	48	4	27	—12	15	8	34	16	14	89	1.03	0.0	10	7,136	nw.	34	nw.	11	10	8	12	5.5	9.0	4.6
Bismarck	1,674	4	57	28.25	30.12	+ .05	18.4	— 7.6	58	4	28	—11	12	8	40	16	13	85	0.78	+ 0.1	10	7,694	nw.	43	nw.	22	11	6	13	5.7	10.1	4.9
Devils Lake	1,482	11	44	28.40	30.05	— .01	15.4	— 7.2	50	4	26	—20	15	5	30	13	11	84	0.47	— 0.2	10	8,264	w.	35	w.	9	8	11	11	5.6	5.9	1.7
Williston	1,896	40	47	28.01	30.08	+ .02	17.0	— 8.2	50	4	27	—14	10	7	35	15	13	89	1.25	+ 0.6	13	5,857	w.	40	nw.	22	6	13	11	6.3	12.1	3.3
Upper Mississippi Valley.							**32.6**	**— 5.1**											**76**	**2.55**	**+ 0.5**								**6.5**		
Minneapolis	918	102	208	.....	.....	.....	23.0	.....	44	9	31	0	24	15	35	.....	.....	.....	1.25	+ 0.1	11	9,872	w.	43	nw.	12	7	4	19	7.1	12.1	3.5
St. Paul	940	203	212	29.07	30.01	— .05	22.8	— 8.1	45	9	31	— 2	24	14	35	21	17	77	1.12	— 0.2	11	7,946	nw.	42	nw.	12	4	12	14	7.0	12.1	6.4
La Crosse	714	11	48	29.21	30.01	— .06	27.6	— 6.2	47	10	35	3	29	20	32	.....	.....	.....	2.55	+ 1.0	11	4,821	nw.	24	w.	12	2	7	21	8.0	4.7	1.0
Madison	974	70	78	28.92	30.00	— .06	29.1	— 5.1	70	11	36	4	29	22	50	26	23	78	3.56	+ 1.8	12	8,311	nw.	34	s.	11	4	6	20	7.8	6.8	3.8
Charles City	1,015	10	49	28.91	30.03	— .05	26.6	— 6.4	48	10	36	3	12	18	34	24	21	84	1.35	0.0	9	6,788	nw.	32	sw.	13	3	8	19	7.8	1.7	....
Davenport	606	71	79	29.35	30.04	— .04	32.2	— 5.3	76	11	40	5	29	24	62	29	26	80	3.84	+ 2.1	11	7,169	w.	34	nw.	12	10	6	14	6.1	2.5	T.
Des Moines	861	84	101	29.10	30.04	— .04	32.3	— 4.5	55	26	41	4	12	24	38	28	23	71	1.22	— 0.3	8	6,949	nw.	38	sw.	13	7	7	16	6.6	1.9	....
Dubuque	698	100	115	29.26	30.04	— .03	30.7	— 5.3	70	11	39	5	29	23	54	27	24	77	3.04	+ 1.2	11	5,892	nw.	26	nw.	12	5	8	17	7.3	2.9	1.4
Keokuk	614	64	78	29.37	30.07	— .02	34.7	— 4.7	79	11	43	4	29	26	65	31	28	79	2.88	+ 1.0	10	7,254	nw.	37	w.	12	10	11	9	5.5	2.0	1.0
Cairo	350	87	93	29.74	30.14	+ .02	42.6	— 4.3	78	11	52	18	13	34	42	37	31	66	3.30	— 0.7	11	7,742	s.	44	nw.	11	9	6	15	6.1	0.1	....
La Salle	536	56	64	29.46	30.05	— .03	33.2	— 4.6	76	11	41	9	29	25	62	.....	.....	.....	2.26	— 0.4	12	7,829	w.	37	nw.	11	10	7	13	5.8	1.1	0.1
Peoria	609	11	45	29.38	30.06	— .03	33.3	— 4.2	77	11	42	6	29	24	60	30	26	80	3.01	+ 0.4	11	7,154	s.	37	sw.	11	8	8	14	6.4	2.7	0.8
Springfield, Ill.	644	10	91	29.37	30.07	— .03	36.0	— 4.7	76	11	44	10	29	28	57	32	28	76	3.10	+ 0.4	13	8,183	s.	40	se.	11	9	10	11	5.6	2.6	0.4
Hannibal	534	74	109	29.48	30.07	— .02	36.6	— 3.9	82	11	46	6	29	27	66	.....	.....	.....	2.30	+ 0.4	12	8,196	sw.	54	sw.	11	10	12	8	5.1	2.3	0.5
St. Louis	567	208	317	29.60	30.08	— .02	39.2	— 4.2	78	11	48	12	12	31	60	35	30	71	3.44	+ 0.6	11	9,398	s.	48	nw.	11	9	10	11	5.7	1.8	0.2
Missouri Valley.							**33.0**	**— 4.4**											**71**	**0.93**	**— 0.3**								**5.0**		
Columbia, Mo.	784	11	84	29.22	30.08	— .01	37.8	— 4.6	82	11	48	6	29	27	69	.....	.....	.....	2.49	+ 0.2	8	7,316	s.	41	nw.	11	11	10	9	5.1	2.8	0.5
Kansas City	963	161	181	29.01	30.07	— .02	39.0	— 2.5	76	11	49	6	12	29	65	34	28	68	2.17	+ 0.3	9	10,542	nw.	50	nw.	11	8	11	11	5.5	2.6	T.
St. Joseph	967	11	49	29.00	30.06	.....	36.2	.....	67	11	46	5	12	26	59	32	27	73	1.56	.....	7	7,713	nw.	41	nw.	12	11	10	9	5.1	2.0	T.
Springfield, Mo.	1,324	98	104	28.66	30.10	.00	40.4	— 4.0	80	11	50	9	12	30	67	35	30	75	2.16	— 0.5	6	9,522	se.	54	nw.	11	14	6	10	4.6	0.6	T.
Iola	984	11	50	29.00	30.11	+ .02	40.0	— 3.0	79	11	52	7	29	28	67	.....	.....	.....	1.23	— 0.2	5	6,885	nw.	33	s.	16	12	6	12	4.9	3.1	T.
Topeka	983	85	101	.....	.....	.....	38.5	— 3.2	73	10	50	7	12	27	58	.....	.....	.....	0.96	— 0.3	7	8,611	s.	42	nw.	11	12	11	7	4.4	2.0	T.
Lincoln	1,189	11	84	28.77	30.08	.00	33.6	— 4.4	62	9	45	2	12	22	36	28	21	66	0.05	— 0.8	3	9,362	nw.	50	nw.	11	12	9	9	4.9	0.5	....
Omaha	1,105	115	121	28.85	30.07	— .01	32.8	— 4.9	59	9	42	1	12	23	36	28	22	67	0.42	— 0.6	7	7,947	nw.	39	nw.	11	11	10	9	5.3	2.8	....
Valentine	2,598	47	54	27.29	30.10	+ .02	28.0	— 5.7	58	21	40	— 7	12	16	44	23	18	72	0.05	— 0.7	3	8,343	nw.	39	sw.	21	10	14	6	4.8	0.5	....
Sioux City	1,135	94	164	28.81	30.07	— .01	28.6	— 5.7	54	25	38	— 1	12	19	39	25	20	73	0.62	— 0.4	9	11,052	nw.	48	nw.	19	11	8	11	5.4	3.1	....
Pierre	1,572	70	75	28.39	30.12	+ .04	26.4	— 5.2	60	4	36	— 3	12	17	39	21	15	67	0.47	0.0	5	7,992	nw.	40	nw.	22	11	10	9	5.3	7.1	....
Huron	1,306	56	67	28.64	30.10	+ .02	23.0	— 4.4	52	30	33	— 6	12	13	44	20	17	81	0.26	— 0.3	10	8,925	nw.	43	s.	21	12	7	11	5.1	2.9	....
Yankton	1,233	49	57	28.71	30.08	.00	27.7	— 5.8	55	25	38	— 3	12	17	39	.....	.....	.....	0.32	— 0.5	6	7,627	nw.	36	nw.	11	12	6	12	5.2	3.5	....
Northern Slope.							**26.5**	**— 5.6**											**74**	**1.15**	**+ 0.3**								**5.9**		
Havre	2,505	11	44	27.41	30.11	+ .08	21.0	— 9.6	54	3	30	—17	10	12	38	19	16	85	1.19	+ 0.4	12	6,165	nw.	35	sw.	29	7	9	14	6.5	11.1	T.
Miles City	2,371	26	48	27.51	30.16	+ .09	25.4	— 5.5	58	25	35	—20	12	15	37	20	16	79	0.95	+ 0.4	9	3,975	w.	28	s.	29	11	10	9	5.3	7.7	....
Helena	4,110	8	56	25.80	30.13	+ .03	27.4	— 5.3	50	25	36	—14	11	19	42	24	20	74	0.64	— 0.1	5	4,880	w.	46	w.	6	7	9	14	6.2	11.0	T.
Kalispell	2,962	11	34	26 97	30.13	+ .06	25.6	— 6.4	46	18	33	— 8	11	19	32	24	21	85	2.49	+ 0.6	14	2,907	nw.	22	n.	8	3	5	22	7.8	16.2	1.5
Rapid City	3,234	46	50	26.60	30.15	+ .07	28.2	— 5.4	58	25	39	— 8	12	18	41	23	17	68	1.40	+ 0.9	9	5,331	nw.	30	n.	9	9	13	8	5.2	11.8	T.
Cheyenne	6,088	56	64	23.95	30.07	.00	30.4	— 4.5	57	20	41	— 9	11	20	54	25	18	62	0.59	+ 0.2	7	11,002	nw.	43	nw.	17	11	17	2	4.6	6.1	....
Lander	5,372	26	36	24.63	30.14	+ .04	26.7	— 2.0	57	20	40	—14	11	13	48	21	13	61	0.68	+ 0.1	6	2,661	ne.	26	nw.	6	10	10	10	5.3	9.5	0.7
Sheridan	3,790	9	47	26.09	30.13	.....	26.1	— 6.3	58	25	38	—15	12	14	40	22	18	78	0.58	.....	10	4,717	nw.	50	nw.	6	6	6	18	7.2	5.9	T.
Yellowstone Park	6,200	11	48	23.86	30.20	+ .09	21.2	— 8.1	43	20	30	—15	10	12	37	18	14	76	2.33	+ 0.9	14	6,195	s.	34	s.	13	5	12	13	6.7	23.9	8.6
North Platte	2,821	11	51	27.10	30.13	+ .05	32.6	— 2.5	63	4	46	— 4	12	19	45	25	20	73	0.04	— 0.4	2	7,088	w.	36	n.	27	10	14	6	4.6	0.2	....

TABLE I.—*Climatological data for United States Weather Bureau stations, November, 1911*—Continued.

Districts and stations.	Elevation of instruments.			Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.										Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Precipitation, inches.			Wind.						Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow on ground at end of month.
	Barometer above sea level, feet.	Thermometer above ground.	Anemometer above ground.	Station reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.					Total.	Departure from normal.	Days with 0.01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.						
Middle Slope.							**39.2**	**— 2.6**											**62**	**0.59**	**— 0.4**									**4.2**		
Denver	5,291	129	136	24.70	30.07	+ .01	36.4	— 2.8	66	10	49	— 2	11	24	43		28	15	46	0.37	— 0.2	5	6,844	s.	43	ne.	26	18	7	5	3.7	4.7	....
Pueblo	4,685	80	86	25.28	30.07	+ .02	37.4	— 1.9	68	10	52	— 3	12	22	60		28	20	56	0.31	— 0.1	5	6,484	nw.	45	nw.	6	18	7	5	3.2	3.4	....
Concordia	1,398	42	50	28.58	30.10	+ .02	37.4	— 2.5	71	16	49	4	12	26	47		31	26	75	0.46	— 0.5	2	6,319	nw.	31	s.	13	10	13	7	4.9	0.1	....
Dodge City	2,509	11	51	27.45	30.12	+ .05	37.9	— 2.6	71	16	51	1	29	24	47		30	25	71	0.99	+ 0.4	5	8,850	nw.	48	n.	27	15	8	7	4.3	5.1	T.
Wichita	1,364	139	158	28.61	30.08	.00	40.6	— 3.2	75	10	52	9	29	29	59		34	27	62	0.87	— 0.3	4	11,624	s.	53	s.	13	15	6	9	4.8	2.3	....
Oklahoma	1,214	10	47	28.81	30.12	+ .04	45.5	— 2.4	83	11	58	11	29	33	66		37	29	62	0.54	— 1.7	4	12,471	s.	62	nw.	27	17	4	9	4.1	1.0	....
Southern Slope.							**47.2**	**— 3.7**											**58**	**1.09**	**— 0.2**									**4.1**		
Abilene	1,738	10	52	28.30	30.14	+ .07	50.2	— 2.4	87	11	64	14	29	37	59		40	29	50	0.31	— 0.9	3	8,299	s.	36	nw.	27	14	10	6	4.0	.....	.....
Amarillo	3,676	10	49	26.30	30.10	+ .05	41.6	— 2.2	75	16	56	5	29	28	57		33	26	65	0.94	— 0.2	5	9,651	sw.	44	n.	27	20	7	3	3.6	8.2	....
Del Rio	944	8	57	29.13	30.14	+ .09	53.6	— 5.7	86	15	65	18	29	42	42		.....	.....	.....	2.65	+ 0.9	10	4,823	se.	38	n.	11	10	12	8	5.2	.....	.....
Roswell	3,578	9	57	26.43	30.14	+ .09	43.6	— 4.5	79	10	59	10	29	28	53		34	25	60	0.46	— 0.7	5	4,408	n.	39	nw.	27	16	10	4	3.5	0.2	....
Southern Plateau.							**46.4**	**— 2.5**											**51**	**0.33**	**— 0.4**									**2.2**		
El Paso	3,762	110	133	26.26	30.08	+ .08	48.8	— 2.1	74	10	61	16	29	37	42		38	24	43	0.35	— 0.2	3	8,790	nw.	51	w.	11	22	5	2	2.3	0.1	....
Santa Fe	7,013	8	56	23.26	30.17	+ .14	32.3	— 5.9	59	20	43	— 8	28	21	35		25	21	70	1.34	+ 0.6	9	6,829	ne.	42	nw.	11	18	9	3	3.1	12.8	1.7
Flagstaff	6,907	8	57	23.38	30.09	+ .07	34.1	— 0.5	62	20	48	6	29	20	45		26	17	58	0.20	— 1.2	1	6,392	e.	50	sw.	10	24	2	4	2.1	T.	....
Phoenix	1,108	50	56	28.86	30.03	+ .05	57.6	— 1.1	80	20	72	30	30	43	40		46	34	46	T.	— 1.0	0	2,714	e.	22	nw.	11	24	4	2	1.5	.....	.....
Yuma	141	9	58	29.88	30.04	+ .06	60.6	— 1.3	84	4	75	35	29	46	40		47	31	40	0.00	— 0.3	0	5,599	n.	28	n.	11	25	4	1	1.0	.....	.....
Independence	3,910	11	42	26.09	30.13	+ .08	45.2	— 4.0	72	6	61	20	29	30	39		34	23	48	0.10	— 0.2	1	4,363	nw.	32	w.	22	22	7	1	2.9	.....	.....
Middle Plateau.							**36.0**	**— 3.2**											**59**	**0.53**	**— 0.4**									**3.8**		
Reno	4,532	56	63	25.59	30.22	+ .11	39.8	— 1.2	64	3	54	16	11	25	39		32	23	58	0.24	— 0.8	3	4,593	sw.	54	w.	9	20	10	0	2.5	3.2	....
Tonopah	6,090	12	20	24.12	30.13	.....	38.5	.....	56	9	47	12	11	30	34		31	19	45	0.02	— 0.9	1	6,128	w.	49	w.	10	20	8	2	2.8	0.5	....
Winnemucca	4,344	18	56	25.75	30.24	+ .10	35.0	— 1.9	63	3	50	6	30	21	48		29	22	66	0.29	— 0.4	5	4,986	sw.	46	sw.	9	13	5	12	5.1	1.5	....
Modena	5,479	10	43	24.70	30.16	+ .08	33.2	— 5.8	60	4	48	— 1	29	18	40		25	14	50	0.13	— 0.5	2	7,229	w.	60	sw.	10	20	5	5	3.0	0.2	....
Salt Lake City	4,360	147	189	25.73	30.18	+ .06	37.0	— 3.4	59	20	45	13	12	29	33		32	26	67	1.48	+ 0.1	9	4,692	nw.	47	nw.	10	9	8	13	6.1	5.5	....
Durango	6,546	18	56	23.68	30.13	+ .07	34.0	— 3.2	57	20	47	3	29	21	34		26	20	64	0.94	— 0.2	8	4,072	nw.	34	nw.	26	14	10	6	3.5	1.3	....
Grand Junction	4,608	43	51	25.46	30.12	+ .04	36.2	— 3.7	60	10	47	10	28	25	30		30	23	65	0.60	0.0	4	2,992	se.	33	w.	10	16	9	5	3.8	3.2	....
Northern Plateau.							**36.6**	**— 2.0**											**58**	**1.61**	**+ 0.2**									**6.4**		
Baker	3,466	48	53	26.56	30.22	+ .06	32.6	— 2.3	55	3	41	— 2	11	24	32		29	24	71	1.45	+ 0.3	14	4,059	s.	18	se.	13	10	4	16	5.7	8.0	....
Boise	2,739	78	86	27.31	30.24	+ .07	37.8	— 1.8	59	20	46	16	11	30	26		33	27	67	1.70	+ 0.8	9	3,448	se.	29	nw.	10	9	9	12	5.7	0.7	....
Lewiston	757	10	51	29.33	30.16	+ .04	40.5	— 0.4	59	18	49	19	11	32	28		.....	.....	.....	0.82	— 0.5	10	4,916	e.	48	w.	5	6	8	16	7.1	0.4	....
Pocatello	4,477	46	54	25.57	30.20	+ .06	32.5	— 3.8	53	3	41	5	29	24	33		28	23	69	2.02	+ 1.5	12	7,514	se.	35	sw.	26	9	9	12	5.8	8.9	T.
Spokane	1,929	101	110	28.03	30.13	+ .03	35.0	— 2.4	56	3	42	8	11	28	31		32	28	74	2.58	+ 0.3	14	4,614	sw.	32	sw.	14	2	10	18	7.8	18.0	....
Walla Walla	1,045	107	115	29.06	30.16	+ .03	41.4	— 1.5	63	3	49	10	11	34	30		36	30	67	1.10	— 1.0	12	6,020	s.	36	sw.	5	9	4	17	6.4	1.5	....
Nor. Pac. Coast Region.							**44.6**	**— 0.5**											**85**	**5.66**	**— 1.7**									**8.2**		
North Head	211	11	56	29.89	30.13	+ .08	46.7	— 1.0	58	1	50	27	11	43	15		46	44	90	7.56	+ 1.2	25	15,144	nw.	78	se.	12	2	3	25	8.7	1.5	....
Port Crescent	259	8	53	29.78	30.07	+ .07	40.5	— 1.8	56	17	47	13	11	34	20		.....	.....	.....	6.39	— 1.1	20	4,262	s.	33	ne.	9	0	12	18	7.9	13.0	....
Seattle	125	185	224	29.97	30.11	+ .07	44.7	+ 0.2	57	7	49	22	11	40	16		42	30	82	3.26	— 2.6	19	8,549	s.	52	sw.	20	1	8	21	8.2	3.0	....
Tacoma	213	113	120	29.88	30.12	+ .08	43.9	— 0.2	56	24	49	19	11	39	18		.....	.....	.....	5.44	— 3.1	20	5,505	sw.	34	w.	5	2	4	24	8.5	2.9	....
Tatoosh Island	86	7	57	29.93	30.03	+ .06	45.2	— 0.7	54	3	48	25	11	42	16		44	41	84	11.12	— 1.0	24	15,094	ne.	70	s.	20	2	5	23	8.7	11.8	....
Portland, Oreg.	153	68	106	29.99	30.16	+ .06	46.0	+ 0.4	63	1	52	24	11	40	18		44	41	82	2.64	— 3.8	18	5,731	sw.	33	sw.	12	0	5	25	8.8	2.2	....
Roseburg	510	9	57	29.65	30.21	+ .09	45.0	— 0.6	60	5	52	25	11	38	23		43	41	86	3.18	— 1.2	15	1,931	s.	18	s.	14	3	13	14	6.6	3.0	....
Mid. Pac. Coast Region.							**53.2**	**— 0.3**											**64**	**0.77**	**— 2.4**									**3.2**		
Eureka	80	73	89	30.15	30.22	+ .11	48.6	— 2.4	64	2	55	32	11	43	21		46	45	87	2.09	— 3.6	10	4,137	n.	43	sw.	9	5	14	11	6.1	.....	.....
Mount Tamalpais	2,375	11	18	27.67	30.16	+ .07	52.8	.....	69	3	58	29	11	48	18		43	33	53	1.49	— 2.2	5	14,781	ne.	78	nw.	8	21	4	5	2.9	.....	.....
Point Reyes Light	490	7	18	29.59	30.10	.....	54.6	.....	73	26	60	43	11	50	22		.....	.....	.....	0.49	.....	5	14,321	nw.	70	nw.	7	18	8	4	3.4	.....	.....
Red Bluff	332	50	56	29.78	30.14	+ .03	54.6	+ 1.2	84	3	67	30	11	42	38		44	32	46	0.13	— 3.1	2	4,259	nw.	27	nw.	21	21	4	5	3.0	.....	.....
Sacramento	69	106	117	30.07	30.14	+ .05	53.9	+ 0.5	77	3	66	31	11	42	35		48	43	68	0.15	— 2.0	2	4,367	se.	31	s.	10	22	6	2	2.5	.....	.....
San Francisco	155	200	204	29.97	30.14	+ .05	57.3	+ 1.8	77	3	65	42	11	50	26		49	42	65	0.60	— 1.9	5	3,749	nw.	28	sw.	9	18	10	2	3.2	.....	.....
San Jose	141	12	110	29.99	30.14	.....	51.7	— 2.7	78	3	67	29	24	36	40		.....	.....	.....	0.18	— 1.7	2	2,980	nw.	28	nw.	10	25	4	1	1.7	.....	.....
Southeast Farallon	30	9	17	30.12	30.15	.....	53.6	.....	64	27	56	46	11	51	11		.....	.....	.....	0.30	— 2.2	4	12,245	nw.	52	nw.	21	20	7	3	2.7	.....	.....
S. Pac. Coast Region.							**59.3**	**+ 2.2**											**52**	**0.19**	**— 1.1**									**2.3**		
Fresno	330	62	70	29.78	30.14	+ .08	53.4	— 1.2	77	4	67	31	11	40	35		44	33	53	0.17	— 0.9	1	2,587	e.	19	nw.	10	20	10	0	2.1	.....	.....
Los Angeles	338	159	191	29.68	30.05	+ .03	64.1	+ 5.7	86	19	75	47	23	54	31		50	34	45	0.10	— 1.4	1	4,419	ne.	34	nw.	11	20	7	3	2.4	.....	.....
San Diego	87	94	102	29.95	30.04	+ .02	61.7	+ 2.7	82	24	70	44	29	53	33		52	43	58	0.02	— 0.8	1	3,907	ne.	19	nw.	22	22	7	1	2.0	.....	.....
San Luis Obispo	201	47	54	29.89	30.11	+ .05	58.0	+ 1.7	83	2	71	34	29	45	38		48	37	53	0.46	— 1.2	1	3,700	n.	25	n.	11	19	7	4	2.7	.....	.....
West Indies.																																	
Grand Turk	11	6	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan	82	48	90	29.87	29.95	+ .05	79.4	.....	89	22	85	70	3	74	15		.....	.....	.....	3.49	— 3.4	22	5,697	se.	27	e.	11	17	11	2	3.6	.....	.....
Panama.																																	
Ancon	92	6	69	29.73	29.82	.....	79.4	.....	94	27	87	68	14	72	21		75	75	94	7.57	— 3.2	20	3,997	nw.	19	s.	15	5	22	3	5.0	.....	.....
Culebra	404	5	62	29.42	29.83	.....	78.6	.....	89	28	85	69	14	72	17		74	73	94	12.37	— 0.1	25	3,359	nw.	32	e.	2	0	13	17	7.4	.....	.....
Colon	10	5	71	29.83	29.84	.....	79.5	.....	89	27	84	72	14	75	15		75	75	89	15.81	— 6.0	23	5,583	se.	27	ne.	30	3	21	6	6.4	.....	.....

TABLE II.—*Accumulated amounts of precipitation for each five minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any five minutes, or 0.80 in one hour, during November, 1911, at all stations furnished with self-registering gages.*

Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive rate began.	Depths of precipitation (in inches) during periods of time indicated.												
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Abilene, Tex.	7			0.20														0.06			
Albany, N. Y.	12			0.63														0.30			
Alpena, Mich.	11–12			1.60														(*)			
Amarillo, Tex.	26–27			0.41														(*)			
Anniston, Ala.	6	7.25 a. m.	10.45 a. m.	1.16	8.13 a. m.	8.38 a. m.	0.07	0.05	0.09	0.30	0.44	0.49									
Asheville, N. C.	6			0.61														0.31			
Atlanta, Ga.	6			1.01														0.39			
Atlantic City, N. J.	18	D. N. a. m.	10.50 a. m.	1.12	7.17 a. m.	7.42 a. m.	0.23	0.09	0.23	0.33	0.40	0.46									
Augusta, Ga.	11	D. N. a. m.	D. N. a. m.	0.83	3.42 a. m.	4.02 a. m.	0.03	0.14	0.27	0.51	0.76										
Baker, Oreg.	14–15			0.75														(*)			
Baltimore, Md.	6			1.35														0.57			
Bentonville, Ark.	11			0.66														0.47			
Binghamton, N. Y.	18			0.31														0.12			
Birmingham, Ala.	6	6.35 a. m.	10.55 a. m.	1.13	7.53 a. m.	8.36 a. m.	0.17	0.14	0.41	0.52	0.57	0.64	0.68	0.73	0.88	0.92					
Do.	8	1.34 p. m.	5.05 p. m.	1.06	2.55 p. m.	3.25 p. m.	0.16	0.07	0.13	0.23	0.49	0.66	0.75								
Do.	17	7.40 p. m.	10.05 p. m.	0.75	7.45 p. m.	8.13 p. m.	0.01	0.17	0.41	0.46	0.50	0.56	0.61								
Bismarck, N. Dak.	10–11			0.48														(*)			
Block Island, R. I.	1			1.06														0.54			
Boise, Idaho	15			0.42														(*)			
Boston, Mass.	12			0.48														0.35			
Buffalo, N. Y.	12			0.65														0.19			
Burlington, Vt.	12			0.60														0.37			
Cairo, Ill.	5			0.99														0.27			
Canton, N. Y.	17–18			0.67														(*)			
Charles City, Iowa	16–17			0.73														(*)			
Charleston, S. C.	28			0.90														0.53			
Charlotte, N. C.	6			0.93														0.38			
Chattanooga, Tenn.	17	7.02 p. m.	10.45 p. m.	0.86	8.41 p. m.	8.50 p. m.	0.29	0.35	0.40												
Cheyenne, Wyo.	10–11			0.38														(*)			
Chicago, Ill.	11–12			1.51														(*)			
Cincinnati, Ohio.	12	1.10 a. m.	7.30 a. m.	0.80	1.20 a. m.	1.25 a. m.	0.01	0.36													
Cleveland, Ohio.	12			1.34														0.47			
Columbia, Mo.	11			0.44														0.31			
Columbia, S. C.	28			1.22														0.41			
Columbus, Ohio.	5–6			1.14														(*)			
Concord, N. H.	14–15			0.78														(*)			
Concordia, Kan.	5			0.45														0.13			
Corpus Christi, Tex.	8			0.66														0.60			
Davenport, Iowa.	8–9			1.70														(*)			
Dayton, Ohio.	12			0.52														0.27			
Del Rio, Tex.	7			1.78														0.39			
Denver, Colo.	22			0.20														(*)			
Des Moines, Iowa.	5			0.49														(*)			
Detroit, Mich.	12			0.70														0.44			
Devils Lake, N. Dak.	9–10			0.17														(*)			
Dodge City, Kans.	1			0.53														(*)			
Dubuque, Iowa.	9			1.01														0.28			
Duluth, Minn.	14			0.61														0.08			
Durango, Colo.	1–2			0.51														(*)			
Eastport, Me.	15			0.68														0.18			
Elkins, W. Va.	6			1.17														0.23			
El Paso, Tex.	4			0.32														0.09			
Erie, Pa.	12			1.02														0.17			
Escanaba, Mich.	11			0.45														0.26			
Eureka, Cal.	9			0.52														0.21			
Evansville, Ind.	5–6			0.57														(*)			
Flagstaff, Ariz.	1			0.20														(*)			
Fort Smith, Ark.	22			0.77														0.25			
Fort Wayne, Ind.	7–8	5.25 p. m.	6.00 a. m.	1.42	3.03 a. m.	3.21 a. m.	0.65	0.15	0.32	0.41	0.50										
Fort Worth, Tex.	17	4.14 a. m.	4.30 a. m.	0.40	4.17 a. m.	4.27 a. m.	0.01	0.26	0.38												
Fresno, Cal.	10			0.17														0.09			
Galveston, Tex.	7	1.50 a. m.	8.35 a. m.	2.71	3.11 a. m.	3.46 a. m.	0.32	0.10	0.26	0.54	0.75	0.89	1.09	1.19							
Grand Haven, Mich.	11–12	6.35 p. m.	D. N. a. m.	2.06	7.01 p. m.	7.46 p. m.	0.06	0.16	0.30	0.41	0.53	0.68	0.93	1.02	1.18	1.30					
Grand Junction, Colo.	10–11			0.36														(*)			
Grand Rapids, Mich.	11			1.19														0.69			
Green Bay, Wis.	11–12			0.67														(*)			
Hannibal, Mo.	11	2.25 p. m.	D. N. p. m.	0.87	2.42 p. m.	2.50 p. m.	0.04	0.21	0.38												
Harrisburg, Pa.	6			0.79														0.33			
Hartford, Conn.	18			1.22														0.28			
Hatteras, N. C.	1			0.37														0.17			
Havre, Mont.	13–14			0.41														(*)			
Helena, Mont.	8–9			0.32														(*)			
Houghton, Mich.	6–7			0.98														(*)			
Houston, Tex.																					
Huron, S. Dak.	10–11			0.08														(*)			
Independence, Cal.	10			0.10														(*)			
Indianapolis, Ind.	11	9.40 p. m.	D. N. a. m.	0.63	10.38 p. m.	10.46 p. m.	0.03	0.32	0.36												
Iola, Kans.	5			0.64														0.20			
Jacksonville, Fla.	28	D. N. a. m.	1.50 p. m.	1.96	4.29 a. m.	4.51 a. m.	0.80	0.19	0.28	0.35	0.42	0.47									
Kalispell, Mont.	12–13			0.70														(*)			
Kansas City, Mo.	5–6			0.61														(*)			
Keokuk, Iowa.	11			1.12														(*)			
Key West, Fla.	19	5.00 p. m.	a. m. 21st	4.21	5.07 p. m.	5.26 p. m.	0.01	0.46	0.61	0.72	0.82										
Knoxville, Tenn.	17			0.58														0.40			
La Crosse, Wis.	9			0.43														0.28			
Lander, Wyo.	16			0.30														(*)			
Lansing, Mich.	11–12	9.15 p. m.	D. N. a. m.	1.25	10.47 p. m.	10.53 p. m.	0.20	0.34	0.36												
La Salle, Ill.	11			0.86														(*)			
Lewiston, Idaho.	25			0.30														0.09			
Lexington, Ky.	6			1.39														0.40			
Lincoln, Nebr.	18			0.02														(*)			
Little Rock, Ark.	17	7.40 a. m.	11.55 a. m.	0.60	10.52 a. m.	11.06 a. m.	0.01	0.26	0.38	0.47											
Los Angeles, Cal.	10			0.10														0.10			
Louisville, Ky.	6			1.79														0.34			
Lynchburg, Va.	18			0.33														0.18			
Macon, Ga.	6			0.51														0.37			
Madison, Wis.	11	12.30 p. m.	2.45 p. m.	0.63	12.33 p. m.	12.43 p. m.	0.01	0.17	0.30												
Marquette, Mich.	16–17			1.06														(*)			
Memphis, Tenn.	17			0.88														0.68			

TABLE II.—*Accumulated amounts of precipitation for each five minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any five minutes, or 0.80 in one hour, during November, 1911, at all stations furnished with self-registering gages*—Continued.

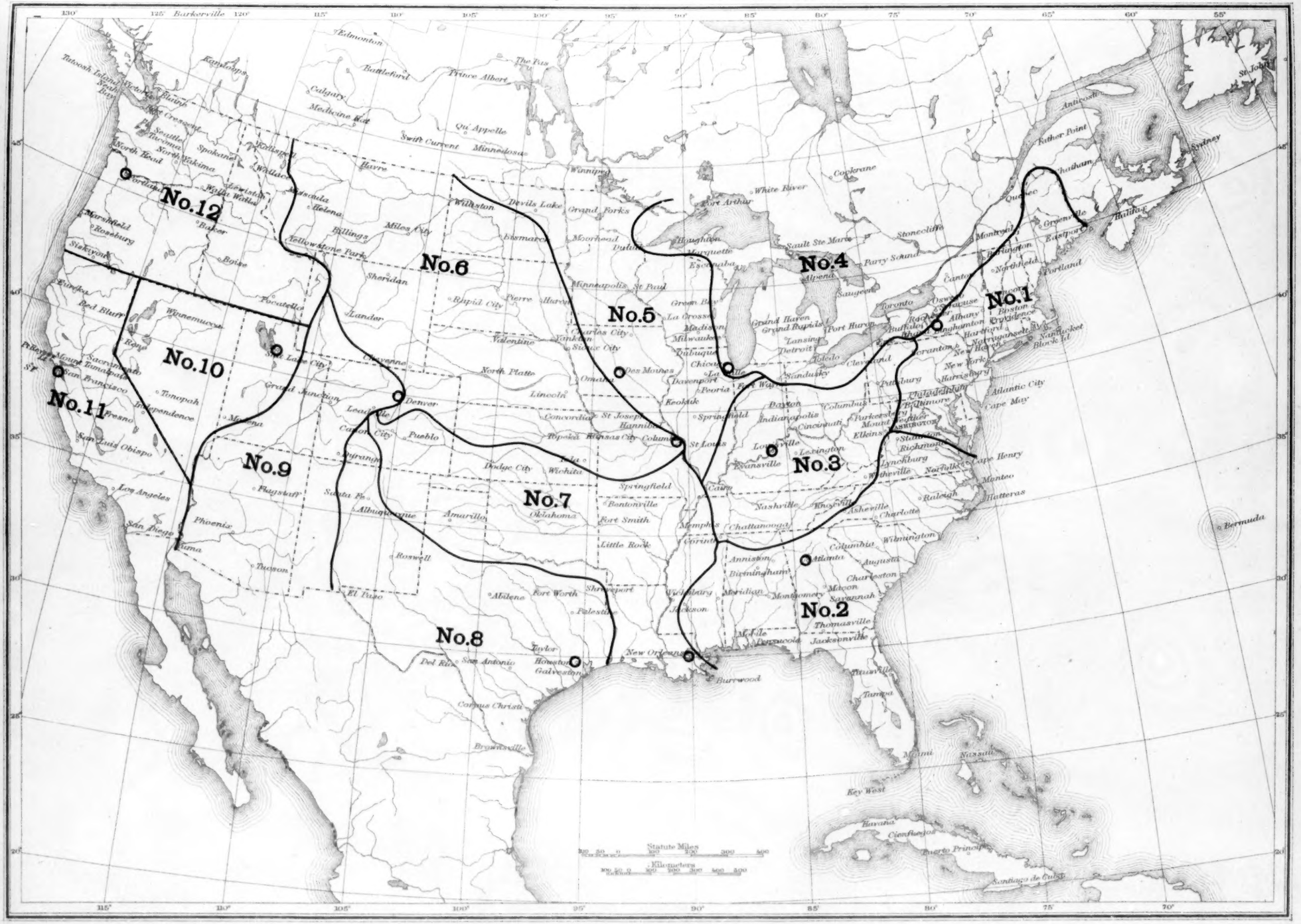
Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive rate began.	Depths of precipitation (in inches) during periods of time indicated.													
		From—	To—		Began	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Meridian, Miss	6	4.45 a. m.	7.32 a. m.	0.84	6.55 a. m.	7.12 a. m.	0.19	0.09	0.27	0.53	0.62	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	17	5.05 p. m.	8.15 p. m.	0.83	6.14 p. m.	6.33 p. m.	0.02	0.17	0.30	0.50	0.63	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miami, Fla	13	5.15 a. m.	5.45 a. m.	0.37	5.20 a. m.	5.32 a. m.	0.01	0.16	0.30	0.35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	21	D. N. a. m.	10.50 a. m.	1.62	8.45 a. m.	9.17 a. m.	0.90	0.07	0.14	0.30	0.45	0.54	0.58	0.63	.....	.....	.....	.....	.....	.....	.....
Milwaukee, Wis	11	.....	.....	0.70	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.38	.....	.....	.....
Minneapolis, Minn	16–17	.....	.....	0.80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Mobile, Ala	23	4.05 p. m.	5.55 p. m.	0.94	4.13 p. m.	4.38 p. m.	0.01	0.21	0.29	0.36	0.53	0.60	.....	.....	.....	.....	.....	.....	.....	.....	.....
	27	10.40 a. m.	7.10 p. m.	3.23	3.40 p. m.	4.03 p. m.	1.90	0.14	0.57	0.98	1.18	1.25	.....	.....	.....	.....	.....	.....	.....	.....	.....
Modena, Utah	10	.....	.....	0.09	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Montgomery, Ala	8	.....	.....	1.54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.45	.....	.....	.....
Moorhead, Minn	10–11	.....	.....	0.42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Mount Tamalpais, Cal	9	.....	.....	0.78	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.36	.....	.....	.....
Mount Weather, Va	6	.....	.....	0.97	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.31	.....	.....	.....
Nantucket, Mass	18	12.20 a. m.	2.50 p. m.	1.00	11.27 a. m.	11.41 a. m.	0.26	0.20	0.43	0.49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	24–25	8.03 a. m.	5.20 a. m.	1.55	3.46 p. m.	4.01 p. m.	0.38	0.10	0.21	0.40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn	5–6	9.50 p. m.	8.50 a. m.	1.86	6.17 a. m.	6.30 a. m.	1.07	0.21	0.37	0.43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	17	4.20 p. m.	D. N. p. m.	0.70	5.33 p. m.	5.45 p. m.	0.13	0.17	0.42	0.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Haven, Conn	18	.....	.....	1.70	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.46	.....	.....	.....
New Orleans, La	27	7.15 a. m.	4.45 p. m.	2.52	1.34 p. m.	2.09 p. m.	1.75	0.06	0.11	0.19	0.39	0.45	0.51	0.56	.....	.....	.....	.....	.....	.....	.....
New York, N. Y	6	.....	.....	1.41	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.34	.....	.....	.....
Norfolk, Va	12	.....	.....	0.37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.37	.....	.....	.....
Northfield, Vt	12–13	.....	.....	0.61	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
North Head, Wash	17	.....	.....	1.56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.21	.....	.....	.....
North Platte, Nebr	5	.....	.....	0.02	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Oklahoma, Okla	5	.....	.....	0.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.13	.....	.....	.....
Omaha, Nebr	18	.....	.....	0.16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Oswego, N. Y	6	.....	.....	0.60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.14	.....	.....	.....
Palestine, Tex	23	.....	.....	0.40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.33	.....	.....	.....
Parkersburg, W. Va	17	.....	.....	0.57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.30	.....	.....	.....
Pensacola, Fla	17–18	10.35 p. m.	1.00 a. m.	0.50	11.24 p. m.	11.39 p. m.	0.01	0.07	0.12	0.46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	27	9.25 a. m.	8.35 p. m.	2.82	5.43 p. m.	6.29 p. m.	0.38	0.15	0.56	0.91	1.30	1.58	1.60	1.63	1.70	1.81	1.85	.....	.....	.....	.....
Peoria, Ill	11–12	4.10 p. m.	10.00 a. m.	1.40	4.13 p. m.	4.55 p. m.	0.01	0.18	0.30	0.52	0.62	0.64	0.81	0.85	0.93	1.01	.....	.....	.....	.....	.....
Philadelphia, Pa	6	.....	.....	1.31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.60	.....	.....	.....
Phoenix, Ariz	13	.....	.....	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.....	.....	.....
Pierre, S. Dak	10–11	.....	.....	0.26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Pittsburgh, Pa	6	.....	.....	0.58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Pocatello, Idaho	10	.....	.....	0.41	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Point Reyes Light, Cal	15	.....	.....	0.21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.12	.....	.....	.....
Port Huron, Mich	6	.....	.....	0.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.18	.....	.....	.....
Portland, Me	15	.....	.....	1.22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.36	.....	.....	.....
Portland, Oreg	12–13	.....	.....	0.84	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.14	.....	.....	.....
Providence, R. I	18	.....	.....	1.27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.43	.....	.....	.....
Pueblo, Colo	11	.....	.....	0.18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Raleigh, N. C	8–9	2.10 p. m.	6.45 a. m.	1.97	5.04 a. m.	5.22 a. m.	1.48	0.12	0.27	0.37	0.42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rapid City, S. Dak	10–11	.....	.....	0.43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Red Bluff, Cal	9	.....	.....	0.08	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.07	.....	.....	.....
Reno, Nev	9–10	.....	.....	0.21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.09	.....	.....	.....
Richmond, Va	24	.....	.....	1.51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.38	.....	.....	.....
Rochester, N. Y	17	.....	.....	0.56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.09	.....	.....	.....
Roseburg, Oreg	15	.....	.....	0.37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.20	.....	.....	.....
Roswell, N. Mex	4	.....	.....	0.06	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.06	.....	.....	.....
Sacramento, Cal	15	.....	.....	0.13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.09	.....	.....	.....
St. Joseph, Mo	22	.....	.....	0.42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.25	.....	.....	.....
St. Louis, Mo	11	6.10 p. m.	11.30 p. m.	0.97	6.16 p. m.	6.32 p. m.	0.01	0.17	0.37	0.48	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Paul, Minn	16–17	.....	.....	0.66	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Salt Lake City, Utah	15–16	.....	.....	0.62	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
San Antonio, Tex	7	.....	.....	1.15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.21	.....	.....	.....
San Diego, Cal	10	.....	.....	0.02	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.01	.....	.....	.....
Sandusky, Ohio	17	.....	.....	0.70	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
San Francisco, Cal	9–10	.....	.....	0.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.20	.....	.....	.....
San Jose, Cal	10	.....	.....	0.15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.05	.....	.....	.....
San Luis Obispo, Cal	10	.....	.....	0.46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.10	.....	.....	.....
Santa Fe, N. Mex	13	.....	.....	0.40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Sault Ste. Marie, Mich	11–12	.....	.....	1.40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Savannah, Ga	28	.....	.....	0.69	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.26	.....	.....	.....
Scranton, Pa	14–15	.....	.....	0.64	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Seattle, Wash	12	.....	.....	0.98	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.14	.....	.....	.....
Sheridan, Wyo	16	.....	.....	0.37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Shreveport, La	23	.....	.....	0.60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.27	.....	.....	.....
Sioux City, Iowa	5	.....	.....	0.36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Southeast Farallon, Cal	15	.....	.....	0.16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.13	.....	.....	.....
Spokane, Wash	12	.....	.....	1.06	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Springfield, Ill	11–12	5.11 p. m.	D. N. a. m.	1.20	5.23 p. m.	5.47 p. m.	0.01	0.10	0.40	0.60	0.70	0.75	.....	.....	.....	.....	.....	.....	.....	.....	.....
Springfield, Mo	5	.....	.....	0.62	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Syracuse, N. Y	12	.....	.....	0.46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Tacoma, Wash	12	.....	.....	1.13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.17	.....	.....	.....
Tampa, Fla	28	D. N. a. m.	1.45 p. m.	2.36	8.14 a. m.	8.53 a. m.	0.69	0.20	0.57	0.82	0.88	0.93	0.99	1.05	1.12	.....	.....	.....	.....	.....	.....
Tatoosh Island, Wash	12	.....	.....	2.41	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.31	.....	.....	.....
Taylor, Tex	7	.....	.....	1.12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.21	.....	.....	.....
Thomasville, Ga	18	1.00 a. m.	5.00 a. m.	1.39	1.16 a. m.	2.00 a. m.	0.01	0.10	0.29	0.58	0.79	0.80	0.99	1.10	1.23	1.28	.....	.....	.....	.....	.....
Toledo, Ohio	6	.....	.....	0.82	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.39	.....	.....	.....
Tonopah, Nev	10	.....	.....	0.02	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Topeka, Kans	5	.....	.....	0.54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.14	.....	.....	.....
Valentine, Nebr	1	.....	.....	0.03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Vicksburg, Miss	8	.....	.....	1.60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.47	.....	.....	.....
Walla Walla, Wash	25	.....	.....	0.15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.10	.....	.....	.....
Washington, D. C	6	.....	.....	0.95	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Wichita, Kans	5	.....	.....	0.40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.16	.....	.....	.....
Williston, N. Dak	8–9	.....	.....	0.76	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Wilmington, N. C	6	.....	.....	0.20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.13	.....	.....	.....
Winnemucca, Nev	10	.....	.....	0.13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.08	.....	.....	.....
Wytheville, Va	6	.....	.....	0.94	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.19	.....	.....	.....
Yankton, S. Dak	1, 18	.....	.....	0.09	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....
Yellowstone Park, Wyo	8–9	.....	.....	0.83	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	(*)	.....	.....	.....

* Self-register not working. † Record incomplete. ‡ No precipitation occurred during month.

TABLE III.—*Data furnished by the Canadian Meteorological Service, November, 1911.*

Districts and stations.	Pressure.			Temperature.						Precipitation.		
	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Mean maximum.	Mean minimum.	Highest.	Lowest.	Total.	Departure from normal.	Total snowfall.
St. Johns, N. F.	29.56	29.70	−.24	35.2	−1.3	41.4	28.9	55	20	7.74	+2.17	5.0
Sydney, C. B. I.	29.80	29.84	−.11	37.1	0.0	44.2	29.9	60	16	8.52	+3.08	2.0
Halifax, N. S.	29.77	29.88	−.13	37.7	+0.4	45.2	30.2	59	19	9.83	+4.17	3.4
Grand Manan, N. B.	29.86	29.91	−.10	38.7	−0.2	46.8	30.6	61	18	4.47	−1.15	6.6
Yarmouth, N. S.	29.85	29.92	−.10	40.1	+0.2	46.7	33.4	59	24	6.28	+1.72	2.1
Charlottetown, P. E. I.	29.79	29.83	−.13	34.3	−1.2	40.4	28.2	56	14	5.57	+1.60	18.3
Chatham, N. B.	29.83	29.85	−.12	30.7	−0.3	38.3	23.0	64	8	4.48	+0.73	18.2
Father Point, Que.	29.80	29.82	−.14	27.9	−1.0	34.4	21.4	63	9	2.60	−0.51	21.8
Quebec, Que.	29.55	29.89	−.13	28.0	−1.0	34.0	21.9	56	10	3.95	+0.19	20.2
Montreal, Que.	29.74	29.96	−.07	31.9	+0.1	37.6	26.2	62	10	3.12	−0.62	8.9
Stonecliffe, Ont.	29.25	29.88	−.13	26.7	−2.4	34.9	18.4	60	1	2.11	−0.47	13.7
Ottawa, Ont.	29.66	30.00	−.02	30.5	−1.2	36.8	24.2	60	7	3.44	+0.90	18.5
Kingston, Ont.	29.65	29.97	−.07	34.1	−0.9	41.1	27.1	58	11	3.68	+0.44	7.9
Toronto, Ont.	29.57	29.96	−.08	35.9	+0.3	42.4	29.4	62	18	3.83	+0.69	6.7
White River, Ont.	28.50	29.85	−.13	17.7	−2.8	26.6	8.7	38	−22	4.60	+2.75	42.0
Port Stanley, Ont.	29.33	29.99	−.06	35.4	−1.4	42.3	28.4	60	13	4.89	+1.52	13.7
Southampton, Ont.	29.21			34.7	−0.3	41.0	28.4	70	12	3.69	−0.01	12.8
Parry Sound, Ont.	29.19	29.90	−.11	31.3	−0.8	38.8	23.7	63	4	5.83	+1.46	23.0
Port Arthur, Ont.	29.20	29.93	−.07	22.9	−1.1	31.4	14.4	44	− 4	1.52	+0.19	8.4
Winnipeg, Man.	29.15	30.02	−.02	17.9	−0.1	26.9	8.9	51	−15	0.59	−0.49	4.9
Minnedosa, Man.	28.11	30.01	−.03	13.1	−4.2	22.6	3.6	47	−23	0.83	−0.17	8.3
Qu'Appelle, Sask.	27.65	30.00	.00	13.3	−5.5	21.1	5.6	46	−18	0.80	−0.09	5.6
Medicine Hat, Alberta.	27.66	30.02	+.02	20.7	−6.7	31.3	10.1	55	−26	2.20	+1.28	21.0
Swift Current, Sask.	27.39	30.09	+.07	15.3	−7.9	22.8	7.7	50	−21	0.64	−0.05	6.0
Calgary, Alberta.	26.37	30.06	+.08	18.6	−7.2	28.0	9.1	51	−21	0.61	−0.27	6.0
Banff, Alberta.	25.32	30.12	+.16	17.5	−8.3	26.4	8.6	46	−37	1.64	−0.63	16.4
Edmonton, Alberta.	27.64	30.01	+.04	19.6	−3.3	30.1	9.1	51	−24	0.52	−0.06	4.5
Prince Albert, Sask.	28.36	29.99	−.04	11.9	−3.5	21.6	2.1	54	−25	2.26	+1.43	22.6
Battleford, Sask.	28.22	30.03	+.01	15.2	−1.1	22.3	8.0	53	−16	0.27	−0.31	0.6
Kamloops, B. C.	28.75	30.07	+.11	26.2	−7.2	32.6	19.9	54	− 5	2.01	+0.55	16.6
Victoria, B. C.	29.96	30.06	+.07	42.8	−0.4	47.4	38.2	56	14	7.40	+0.43	9.1
Barkerville, B. C.	25.56	29.99	+.09	18.0	−5.6	23.9	12.0	40	−24	2.99	−0.30	26.5
Dawson, Yukon.												
Hamilton, Bermuda.	29.96	30.12	+.07	69.3	+0.6	74.3	64.4	80	59	7.00	+2.62	0.0

Climatological Districts of the United States.



106 Climatological Sections of the United States.

Chart I. Hydrographs of Several Principal Rivers, November, 1911.

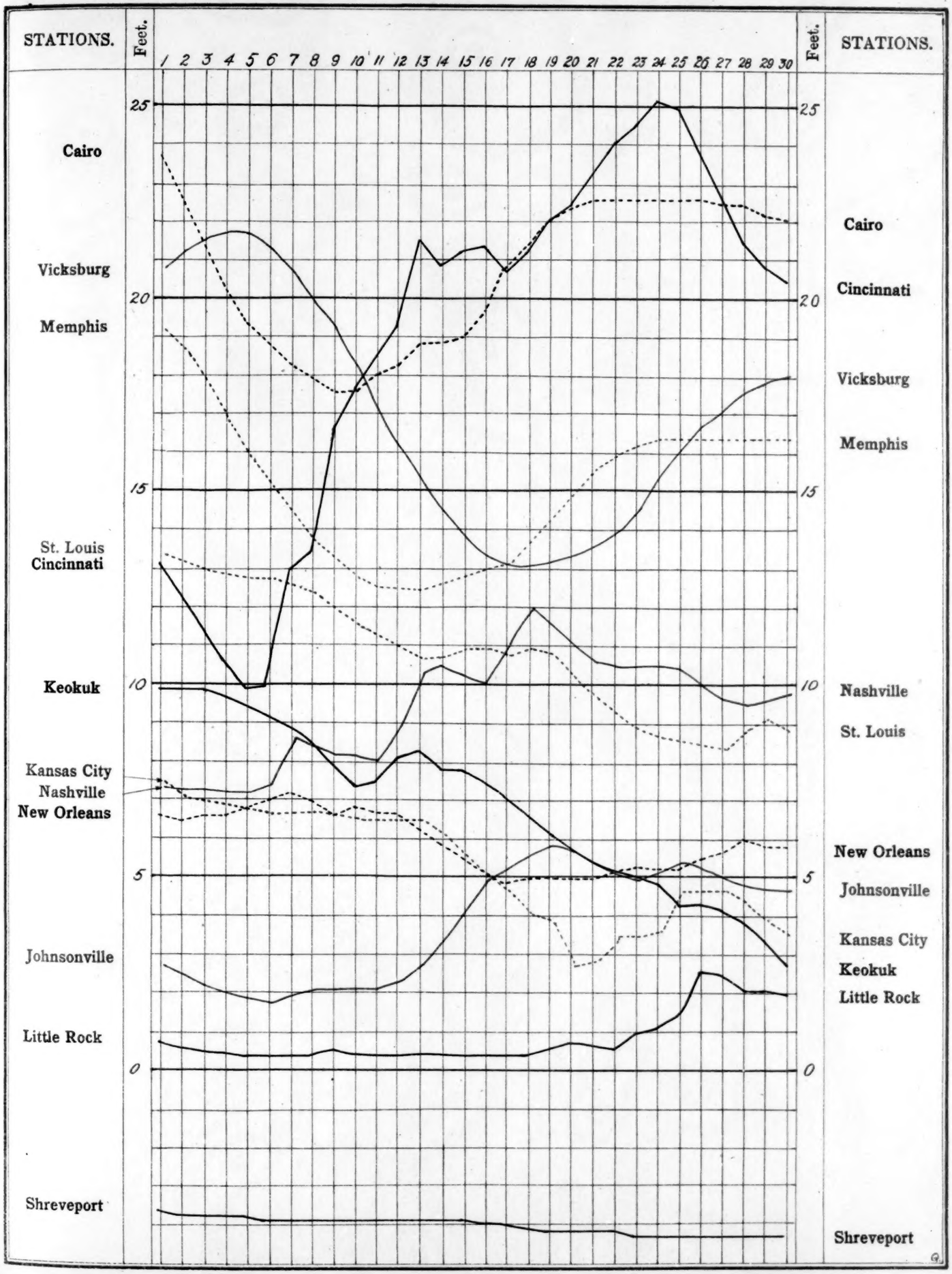


Chart II. Tracks of Centers of High Areas, November, 1911.

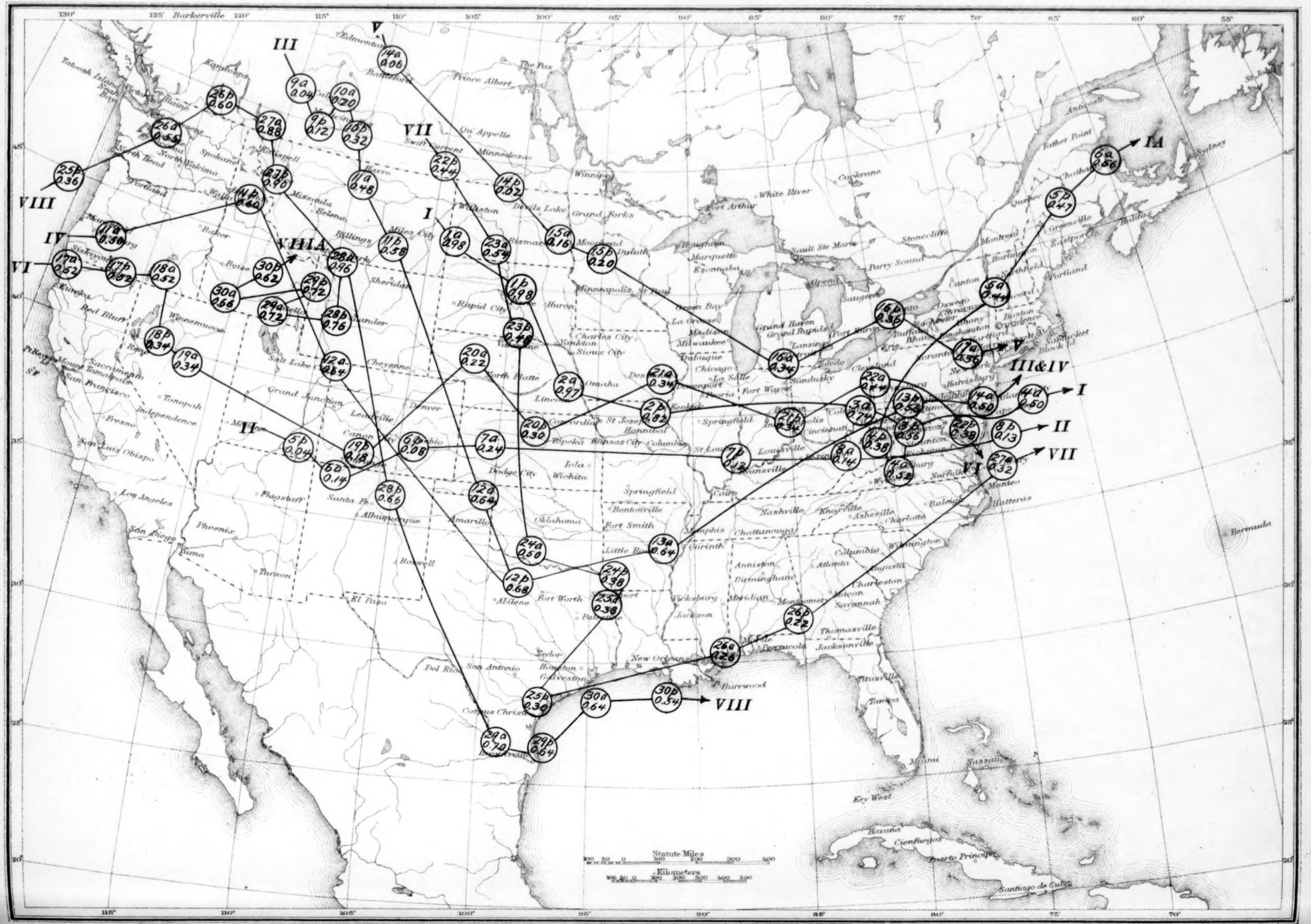


Chart III. Tracks of Centers of Low Areas, November, 1911.

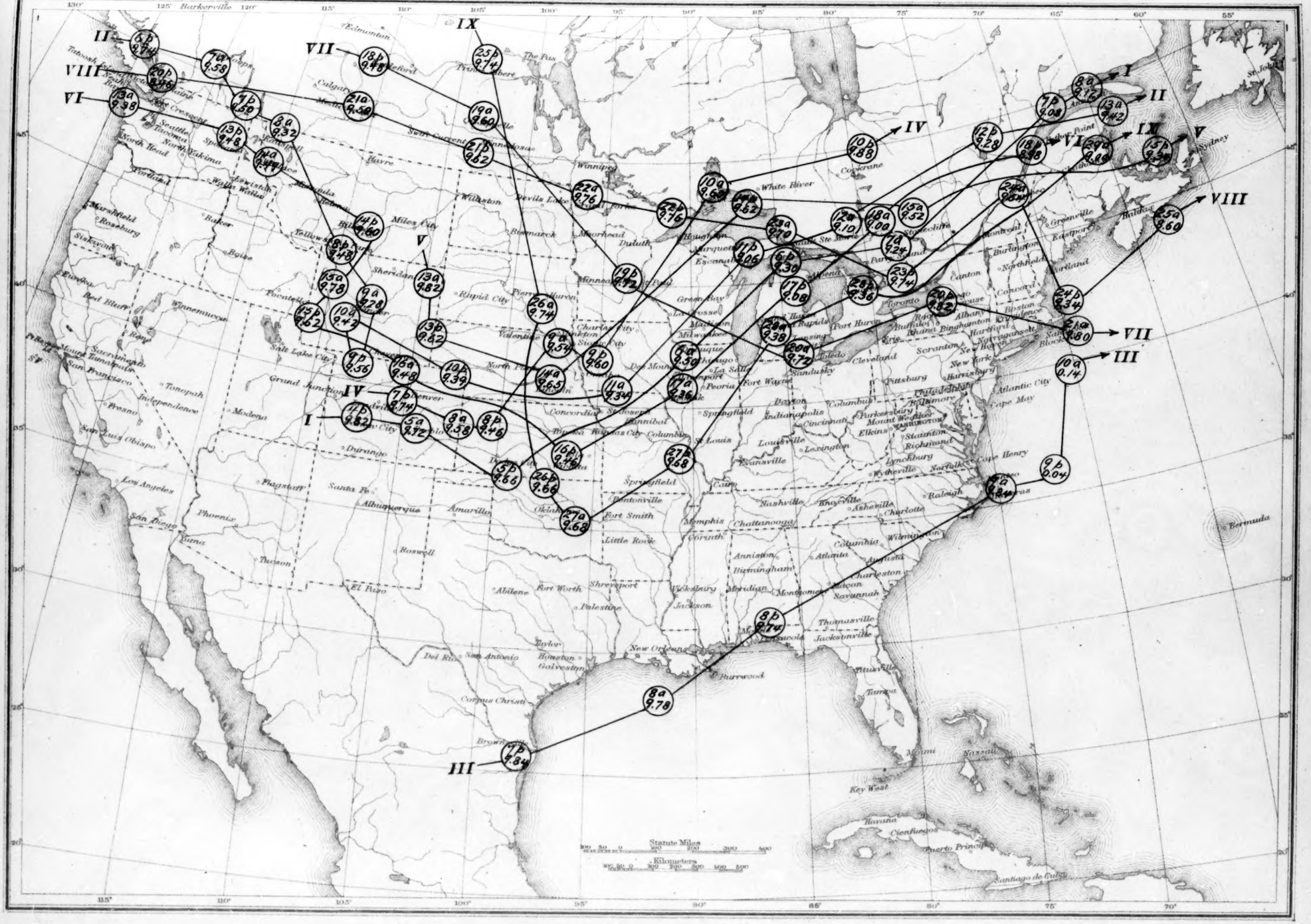


Chart IV. Departure of the Mean Temperature from the Normal, November, 1911.

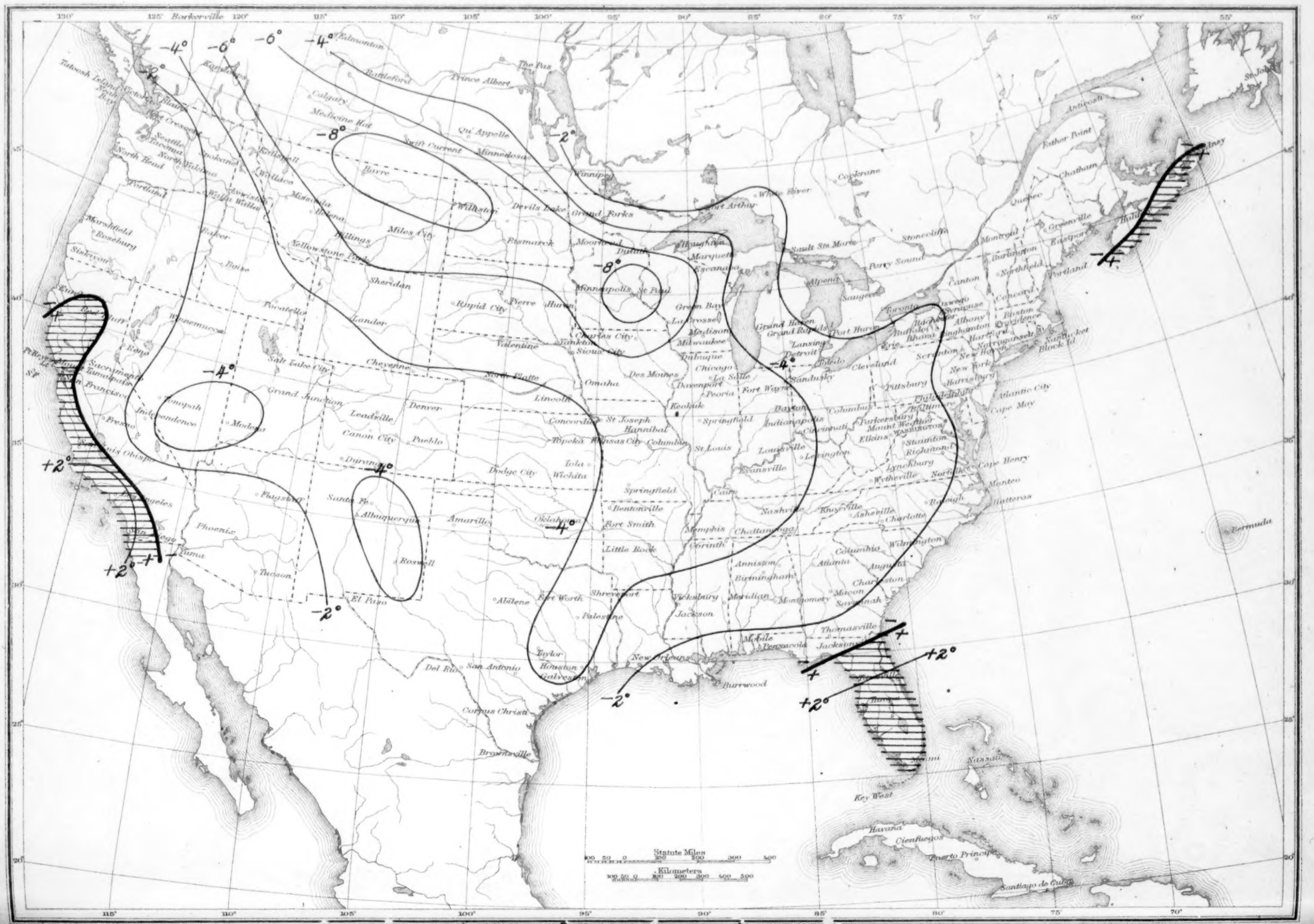


Chart V. Total Precipitation, November, 1911.

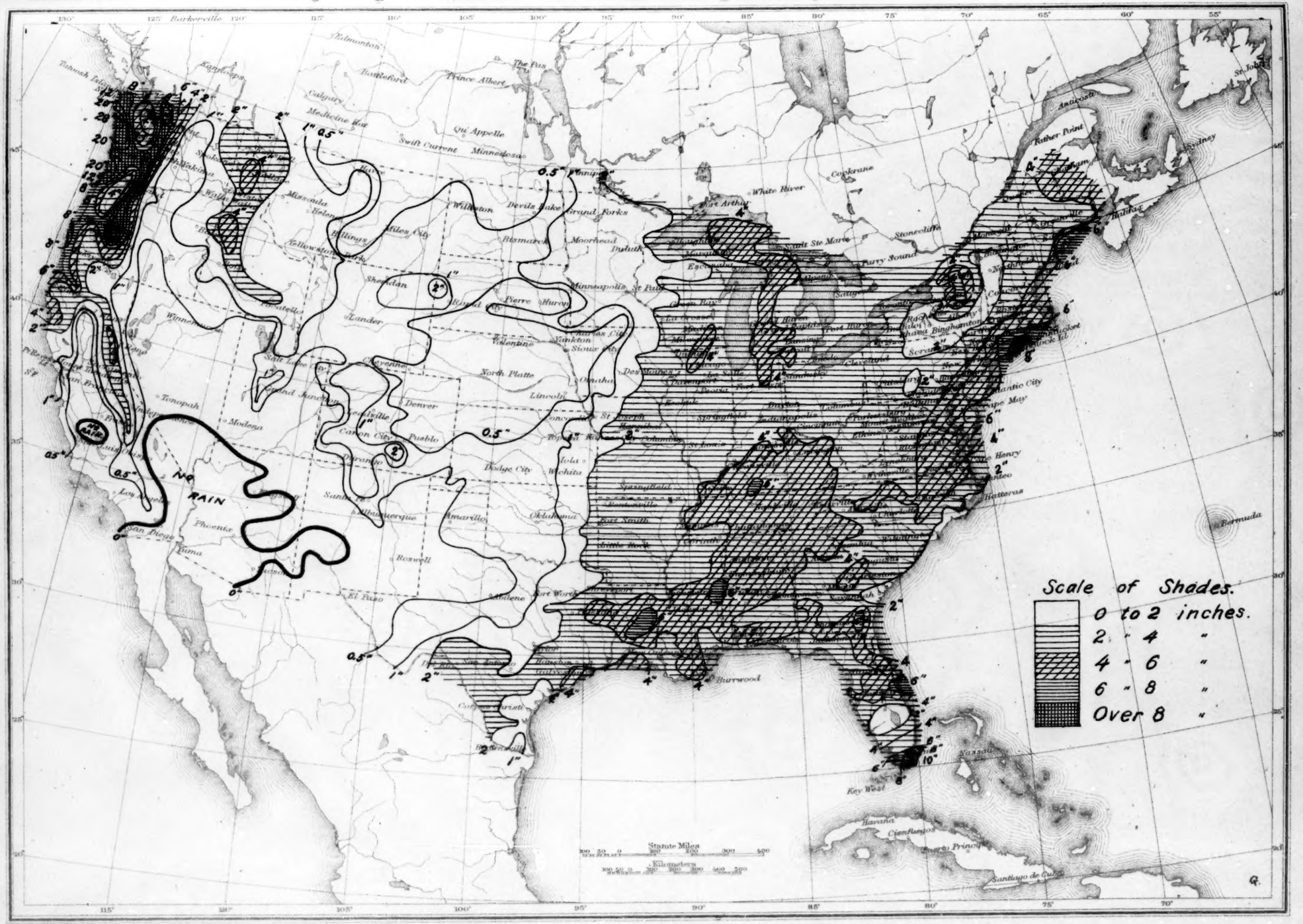


Chart VI. Percentage of Clear Sky between Sunrise and Sunset, November, 1911.

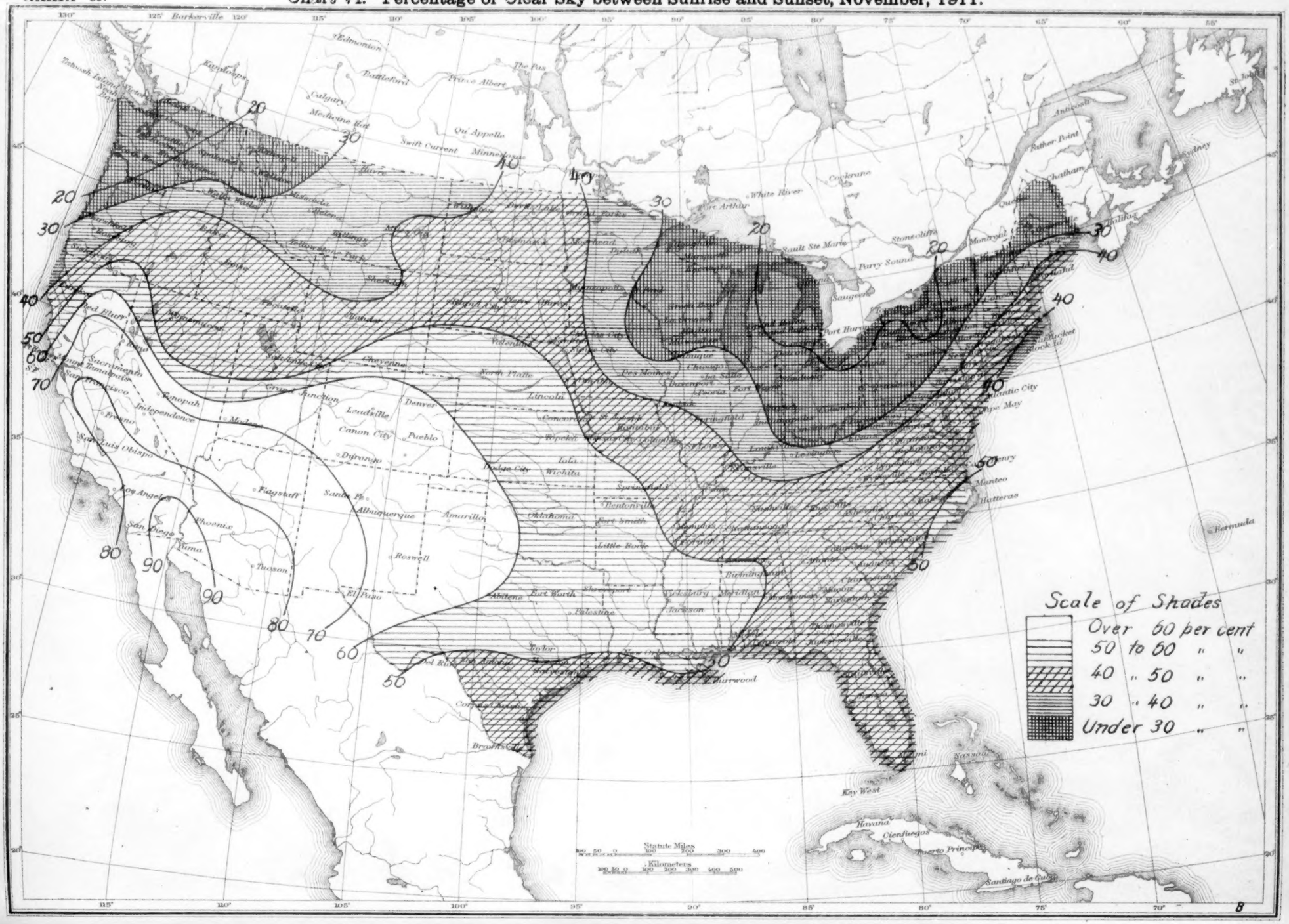


Chart VII. Isobars and Isotherms at Sea Level; Prevailing Winds, November, 1911.

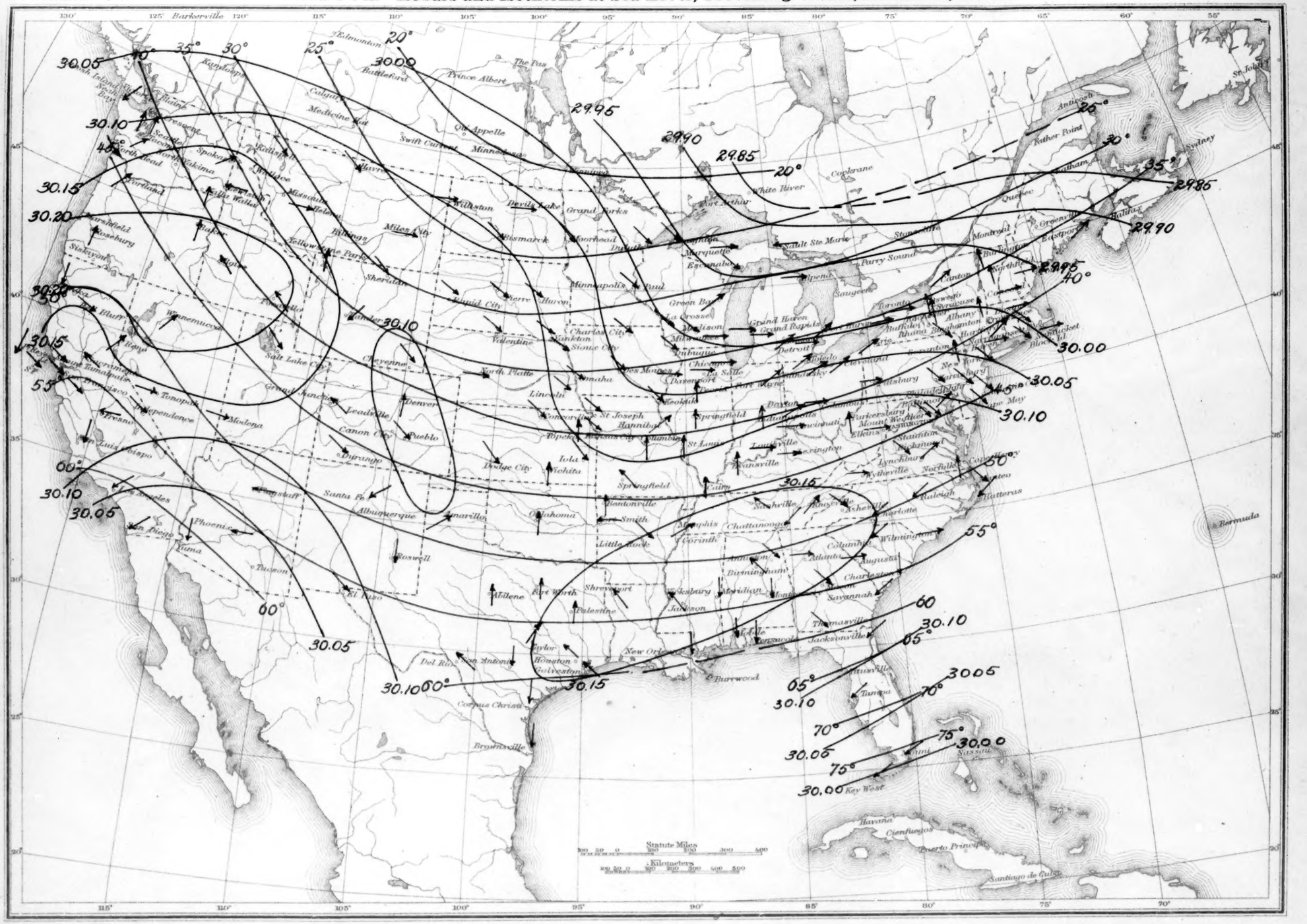

30.05
30.10
30.15
30.20
30.25
30.30
30.00
29.95
29.90
29.85
29.86
29.90
29.95
30.00
30.05
30.10
30.15
30.10
30.05
30.10
30.05
30.10
30.05
30.00
30.00
Statute Miles
Kilometers
Edmonton
Battleford
The Pas
Prince Albert
Calgary
Medicine Hat
Qu'Appelle
Swift Current
Minnedosa
Cochrane
White River
Port Arthur
Father Point
Antigosh
Sydney
St. John
Quebec
Halifax
Bermuda
Barkerville
Kamloops
Nelson
Revelstoke
Kelowna
Penticton
Vernon
Kalispell
Missoula
Helena
Billings
Miles City
Williston
Devils Lake
Grand Forks
Bismarck
Valley City
Fargo
Moorhead
Duluth
Sault Ste Marie
Marquette
Escanaba
Parry Sound
Minneapolis
St. Paul
Green Bay
La Crosse
Madison
Milwaukee
Dubuque
Chicago
La Salle
Davenport
Fort Wayne
Detroit
Toledo
Cleveland
Buffalo
Rochester
Syracuse
Albany
Binghamton
Utica
Erie
Toronto
Oswego
Kingston
Ottawa
Montreal
Sherbrooke
Portland
Spokane
Yakima
Walla Walla
Lewiston
Boise
Pocatello
Idaho Falls
Butte
Yellowstone Park
Sheridan
Rapid City
Pierre
Huron
Aberdeen
Valentine
Charles City
Yankton
Sioux City
Omaha
Des Moines
North Platte
Lincoln
Grand Island
Cheyenne
Salt Lake City
Ogden
Provo
Grand Junction
Leadville
Denver
Pueblo
Canon City
Durango
Dodge City
Wichita
Iola
Springfield
Cairo
Bentonville
Smith
Oklahoma
Amarillo
Albuquerque
Santa Fe
Flagstaff
Roswell
Tucson
Phoenix
Yuma
San Diego
Los Angeles
Santa Barbara
San Luis Obispo
Fresno
Independence
Tonopah
Modena
Reno
Winnemucca
Red Bluff
Eureka
Roseburg
Coquille
Marshfield
Astoria
Kamloops
Barkerville
Abilene
Fort Worth
Shreveport
Meridian
Jackson
Palestine
Houston
Galveston
Del Rio
San Antonio
Taylor
Corpus Christi
Brownsville
El Paso
New Orleans
Vicksburg
Memphis
Corinth
Little Rock
Chattanooga
Nashville
Knoxville
Asheville
Charlotte
Columbia
Wilmington
Atlanta
Augusta
Birmingham
Montgomery
Charleston
Savannah
Thomasville
Mobile
Pensacola
Jacksonville
Tampa
Miami
Nassau
Key West
Havana
Cienfuegos
Puerto Principe
Santiago de Cuba
Evansville
Louisville
Lexington
Cincinnati
Columbus
Springfield
Indianapolis
Terre Haute
Peoria
Rockford
Milwaukee
Madison
Green Bay
La Crosse
Dubuque
Davenport
Rock Island
Moline
Galesburg
Quincy
St. Joseph
Hannibal
St. Louis
Jefferson City
Topeka
Kansas City
Lincoln
Omaha
Grand Island
North Platte
Valentine
Rapid City
Huron
Aberdeen
Williston
Devils Lake
Grand Forks
Fargo
Bismarck
Minot
Moorhead
Duluth
Marquette
Escanaba
Sault Ste Marie
Parry Sound
Sudbury
Sturgeon Falls
Ottawa
Montreal
Quebec
Father Point
Antigosh
Sydney
St. John
Halifax
Bermuda
Hatteras
Norfolk
Portsmouth
Richmond
Lynchburg
Roanoke
Bristol
Knoxville
Asheville
Charlotte
Columbia
Wilmington
Raleigh
Goldsboro
Weldon
Petersburg
Lynchburg
Staunton
Clifton Forge
Parkersburg
Mount Weather
Ellkins
Cincinnati
Columbus
Springfield
Dayton
Zanesville
Wheeling
Pittsburg
Altoona
Harrisburg
Philadelphia
Atlantic City
Cape May
New York
Albany
Syracuse
Rochester
Buffalo
Erie
Toronto
Oswego
Kingston

Chart VIII. Total Snowfall for November, 1911.